WOMEN PARENTING ALONE: RELATIONSHIPS BETWEEN MATERNAL DEPRESSION, MATERNAL SOCIAL SUPPORTS, AND CHILD BEHAVIOUR.

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Abstract

The links between maternal depressive symptomatology, maternal social supports and maternal and teacher ratings of child behaviour were examined in 50 women, with at least two children aged between 4 and 17 years, who were parenting alone. Each woman completed self-report questionnaires on depressive symptomatology, general psychiatric symptoms, the size of their social network and satisfaction with their social supports, and completed a checklist on the behaviour and social competence of their children aged between 4 and 17 years (N=117). Socio-demographic information and an estimate of the amount of stress experienced by each woman over the last 12 months was also obtained. A questionnaire about each child's behaviour was completed by the child's teacher.

Presentation of the results of the study is preceded by a comprehensive review of relevant literature. Then, descriptive information about women parenting on their own is presented. The results pertaining to the relationships between the major variables are as follows: maternal depressive symptomatology, maternal social supports, and maternal ratings of child behaviour were significantly correlated with each other. Maternal and teacher ratings of child behaviour were also correlated. Stepwise multiple regression analysis revealed that maternal ratings of child behaviour was the principal determinant of maternal depressive symptomatology. Women's network size was the secondary determinant and women's stress ratings the third determinant. Maternal depressive symptomatology was the principal, and only, significant determinant of maternal ratings of child behaviour. Women's satisfaction with social supports was the principal determinant of the size of women's social networks, with women's depressive symptomatology accounting for a significant additional

proportion of the variance. Social support variables were the only determinants of other aspects of social support that were assessed. Findings are discussed in regards to related research and implications for the treatment of maternal depression and child behaviour problems.

The interaction effects of child age and gender and maternal depressive symptomatology on maternal and teacher ratings of child behaviour were briefly examined. Interaction effects which were found are presented and discussed. Lastly, limitations of the present study and directions for future research are commented on.

Chapter One

INTRODUCTION

GENERAL INTRODUCTION

One of the closest and most influential relationships impacting on the psychological development of an individual is that between a mother and child. Because of this, much has been written about the nature of the relationship between mothers and their children. This research has identified associations between maternal behaviours, attributes, and circumstances and child characteristics and behaviour.

Due to the predominance of depression amongst women (Nolen-Hoeksema, 1987), and their continued role as primary caretaker, one area that has received attention is the relationship between maternal depression and child development, and in particular, child behaviour problems. In general, research has found that maternal depression is associated with child behaviour problems. For the more severe forms of depression this relationship seems unidirectional in that maternal behaviour is influenced by the presence of depressive symptoms which in turn contributes to behavioural problems in children (Forehand, McCombs & Brody, 1987). With less severe forms of depression, the relationship appears reciprocal with child behaviour problems affecting the prevalence of maternal depressive symptomatology, and conversely, maternal depressive symptomatology influencing child behaviour (Forehand et al., 1987).

A common variable which features in the investigation of both maternal depression and child behaviour problems is maternal social supports. Social support has been reported to function as a mediator, or buffer, preventing or moderating the development of depression (Brown

& Harris, 1978; Thoits, 1982a). Researchers have also found that poor social supports are associated with depression independent of stressful events (Warheit, 1982). Similarly, the extent and quality of maternal social supports appear to be related to child behaviour problems, especially in regard to maternal management of children's problem behaviour (Wahler, Leske & Rogers, 1979; Wahler, 1980a; Dumas & Wahler, 1983), marital distress (Emery, 1982) and infant attachment (Crittenden, 1985; Crockenburg, 1981). Although this research has been less extensive, the association of these variables in distinct areas of investigation suggest maternal social supports may be of relevance to the study of child behaviour problems.

In reality, since individuals live in a dynamic social environment, maternal depression, maternal social supports, and child behaviour problems do not exist in isolation. It is important to explore how these three variables co-exist in order to determine if there is an interaction between all three variables, and if there is so, to distinguish what the nature of this interaction is. However, although these variables have been found to interact, as yet there is limited research looking at the interrelationship between all three variables. Most research to date has focused on maternal social support from within the family milieu (Billings & Moos, 1983, 1985a; Cox, Puckering, Pound & Mills, 1987; Fendrich, Warner and Weissman, 1990; Hopps, Biglan, Sherman, Arthur, Friedman & Osteen, 1987). While links between maternal extrafamilial social supports and depression and child behaviour problems have been identified, few researchers have considered the interrelationship between maternal depression, child behaviour problems, and maternal social supports outside the family unit (Johnson & Pelham, 1990; Panaccione and Wahler, 1986; Williams & Carmichael, 1985; Zahn-Waxler, 1987). Overall, research supports a three-way interaction

between maternal depression, child behaviour problems, and maternal social supports outside the family unit.

Continued investigation of the links between maternal depression, child behaviour problems, and maternal social supports will provide knowledge for understanding the etiology of, and enhancing treatment efficacy for, depression and child behaviour problems. This knowledge is of utmost importance as these dysfunctions have a detrimental effect on the well-being not only of the person who has them but also on the mother-child relationship, other family members in turn, and ultimately the wider community.

The following review and investigation more fully explore the interaction between maternal depression, maternal social supports and child behaviour problems. To enable a better understanding of how these variables are related, research in this area will be discussed as follows: first, inherent methodological problems will be identified and an outline given as to how this review addresses these problems; second, a theoretical context from which this research has emerged will be provided. Research concerned with the relationship between the three variables under study will then be reviewed: firstly, maternal depression and child behaviour problems; secondly, maternal depression and social supports, and thirdly, maternal social supports and child behaviour problems. Lastly, research that has explored the relationship between maternal depression, maternal social supports, and child behaviour problems will be presented.

Before discussing the present research, a rationale for the current study is presented which will include an outline of reasons for the focus on women who are parenting alone. Finally, the aims of the present study and hypotheses being tested are presented.

METHODOLOGICAL ISSUES

The following review has attempted to comprehensively discuss relevant literature in the areas under study. However, in doing so I have been faced with the problems of definitional discrepancies in the conceptualisation and measurement of the major variables, namely, depression, social support, and child behaviour problems. Such discrepancies can make the comparison of research methodologically flawed, thus hindering conclusions being drawn across studies.

Firstly, the term depression is used to refer to a concept, clinical disorder, symptom and mood. Depression may in fact be part of all of these and both clinically significant depressive disorders and depressive symptoms have been studied with regard to their relationship with child behaviour problems and social supports. Secondly, the investigation of social support and maternal depression or child behaviour problems has separately examined emotional, instrumental and informational social support, social integration, and social networks. Thirdly, related research has studied problematic child behaviour in terms of general child behaviour, clinically diagnosed child psychopathologies, infant attachment and specific aspects of child behaviour such as externalising disorders, noncompliant behaviour and conduct problems.

Rather than limit discussion to specific definitions my review has attempted to address this problem by providing appropriate definitions of the concept under study, and details of the specific aspect being measured. In doing so, I hope that, rather than weakening conclusions, the inclusion of findings from a range of different conceptual areas will enhance the strength and breadth of any conclusions drawn about how these variables are related.

THEORETICAL CONTEXT

As the volume of literature in this area has grown, research has become very focused. Researchers whose aim is primarily to explore rather than explain have tended not to discuss the theory from which it was initially generated, and thus seeming to take an atheoretical or eclectic theoretical stance. However, specific theoretical contexts have given rise to the investigation of the relationship between maternal depression and child behaviour problems, depression and social supports, and social supports and child behaviour problems. In many instances several lines of investigation based on diverse theories have occurred concurrently. Theories that focus on genetic and environmental factors involved in human development have both been important. Genetic theories have been most influential in clinical studies that have looked at more severe dysfunction such as clinical depression and child psychopathology (e.g., Weissman, Gammon, John, Meirikangas, Warner, Prusoff & Scolomskas, 1987). As an example of genetic research, a line of continuity from parental clinical depression to psychopathology in offspring has been reported in research with adopted offspring (Mendlewicz, 1977).

The majority of research is based upon the almost implicit understanding of the effect the environment has on the individual. Most simply

> individual development may only be adequately understood in the context of constant reciprocal interaction between a changing person and his or her changing environment. This environment is necessarily composed of other people, themselves developing within a dynamic environmental setting.
> (Lerner & Spanier, 1978, p. 13).

Studies which include environmental factors vary in how broadly they conceive the environment with which they are concerned. Social

learning theory encompasses research concerned with the immediate social environment. Research in this area has investigated interactional sequences of behaviour identifying the antecedent behaviours to problem behaviours, and associated aspects of the social environment in which they are most likely to occur (e.g Hops et al., 1987; Patterson, 1980). At a broader level of analysis, ecological theories underpin research that places the mother-child relationship in the context of the wider environment so as to explore how aspects of families' social and physical environment impinge upon an individual's development (e.g. Wahler et al., 1979; Williams & Carmichael, 1985). The influence of the environment is supported by research with less severe forms of depression and child dysfunction for which a transactional model is more appropriate. In this model the mother and child have a reciprocal influence on each other (Forehand et al., 1987). The links reported between maternal social supports and maternal depression (e.g. Brown & Harris, 1978, Miller & Ingham, 1976), and social networks and child development (Cochran & Brassard, 1979) confirm the impact the environment has on the relationships between these variables.

MATERNAL DEPRESSION AND CHILD BEHAVIOUR PROBLEMS

Depression is one of the most pervasive psychopathologies in western cultures, with an estimated 15% of adults experiencing a clinically significant episode in any one year (National Institute of Mental Health, cited in Lewisohn & Hoberman, 1985). As a result there has emerged a large volume of research concerned with the etiology, symptoms, effects, treatment, and associated factors of depression, studying both clinically significant depressive states and subclinical levels of depressive symptomatology.

Part of this research has been concerned with identifying 'at risk' groups. Researchers have concluded that depression consistently exhibits a gender bias. Weissman and Klerman (1977) extensively reviewed research concerned with the prevalence of depressive disorders. The authors reported that, in developed nations, depression is significantly more prevalent in women in both clinical and community groups. A more recent review of this area supported this conclusion, stating that research consistently has found that women are more likely to evidence unipolar depression[1] compared with men (Nolen-Hoeksema, 1987).

In a prospective study of a community sample, Lewinsohn, Hoberman and Rosenbaum (1988) identified 'being female' as a predictive variable in the likelihood of an individual experiencing an episode of unipolar depression. Additionally, research has reported a higher prevalence of depressive symptomatology in women compared with men (Byrne, 1981).

This gender bias has been found in the New Zealand context. The lifetime prevalence of a major depressive illness (Wells, Bushnell, Hornblow, Joyce & Oakley-Browne, 1989) and incidence of clinical depression and depressive symptomatology (McGee, Williams, Kashan & Silva, 1983) have been reported to be significantly greater for New Zealand women compared with men.

Another area of research that has received much attention has been the relationship between depression and social relationships. Studies have looked at both intrafamilial and extrafamilial relationships. Intrafamilial research has focused mainly on the relationship between

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[1] Diagnosis of unipolar depression was based on DSM-III criteria for a major depressive disorder and a dysthymic disorder. The former is evidenced by the acute experience of severe melancholic and/or psychotic depressive symptoms for a period of two weeks or more, the latter by the experience of moderate to severe depressive symptoms for at least a 2 year period.

the depressed person and his or her spouse and/or child(ren). Females, as a high risk group, have been the focus of much research and, because women are generally the primary caregiver, a substantial part of this research has been concerned with the relationship between maternal depression and child development, a good part of which has been concerned particularly with child behaviour problems.

The following section will review literature concerned with this relationship. This discussion will be introduced by a brief overview of previous reviews of research which has studied the link between maternal depression and child behaviour problems. It will then discuss findings in mother-child dyads of clinically depressed mothers, followed by mother-child dyads of children referred to psychiatric clinics for behavioural problems, and lastly, studies with community samples. Because some studies have not distinguished between maternal and paternal depression some findings concern the relationship between parental depression and child development, rather than specifically maternal depression. Post-partum depression, which is distinguished from maternal depression occurring at other life stages, has generated its own specific body of research concerned with the association between post-partum depression and child development. As this research deals with a specific form of depression it will not be included in this review.

Reviews

Weissman (1972) reviewed research concerned with depressed women. The author concluded that depressed mothers had moderate impairment in their relationship with their children. In particular, depressed mothers exhibited difficulties in communication, increased levels of conflict, guilt, resentment and ambivalence. Weissman also found that 6 to 12 year old children of depressed women had higher

levels of hyperactivity and sibling rivalry, and adolescents exhibited more deviant behaviour compared with children of nondepressed women. Beardslee, Bemporad, Keller and Klerman (1983) reviewed 24 quantitative studies which assessed children of bipolar and unipolar depressed parents. Bearing in mind that the assessment and diagnosis of these disorders varied considerably across studies, the authors concluded that there were high rates of depression and impairment in children of depressed parents. Orschavel (1983) reviewed 13 retrospective and prospective studies. The author concluded that the relationship between depressed mothers and their children was impaired by mothers' difficulties in expressing warmth or affection toward their children and, less directly, by their inability to maintain a healthy personal involvement with their family. From a selective review of clinical and nonclinical studies Cytryn, McKnew, Zahn-Waxler, Radke-Yarrow, Gaensbauer, Harmon and Lamour (1984) concluded that findings suggest a developmental line linking child and adult depression. Gelfand and Teti (1990) focused their review on the link between clinically depressed mothers and child psychopathology. They found for the most part that studies have been with infants and school-aged children rather than adolescent children. Despite this, the authors stated "that children of all ages appear to be at heightened risk for emotional and behavioural problems if their mothers are depressed" (p. 333). Lastly, Forehand et al. (1987) reviewed 34 studies. Only research which had used correlational analysis between maternal depression and child measures and comparison with a carefully matched control group was included. Additionally, inclusion criteria demanded that a study had "to report a different measure or assess the sample of subjects at a different point in time than any other study in the review" (p. 2). There were three kinds of samples: studies which included families with a clinically depressed parent, families with identified child behaviour

problems, and families with nonproblem parents and children. Child measures were categorised into four areas: cognitive behaviours, prosocial behaviours, externalizing problems, and internalizing problems. Forehand et al. reported that 55% of the studies found a negative relationship between maternal depression and child functioning for at least some measures.

Thus, over the last 20 years, reviews have consistently, and with increasingly stricter inclusion criteria and methodological analysis, concluded that there is a significant link between maternal, or parental, depression and child behaviour problems.

Clinically Depressed Parents

For the most part research has focused on depression as a clinical disorder, identifying dyads through maternal, and in some instances paternal, depressed inpatients and outpatients. Research has compared depressed patients with a control group and with sufferers from other psychopathologies plus a control group. In these studies, parental depression has been classified as a clinically significant disorder. A number of diagnostic tools have been used to determine the presence of clinical depression. In all instances researchers have utilised Research Diagnostic Criteria (Billings & Moos, 1983; Billings & Moos, 1985a; Caplan, Cogill, Alexandra, Mordecai Robson, Katz & Kumar, 1989; Cytryn, McKnew, Bartko, Lamour & Hamovitt, 1982; Hammen, Gordon, Burge, Adrian, Jaenicke & Hiroto, 1987; Hopps et al., 1987; McKnew, Cytryn, Efron, Gershon & Bunney, 1979; Weissman, Prusoff, Gammon, Merikangas, Leckman & Kidd, 1984; Weissman et al., 1987), or the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-III: Lee & Gotlib, 1989; Zahn-Waxler, Iannotti & Radke-Yarrow, 1984, Zahn-Waxler, 1987). These procedures have in some instances been used in conjunction with psychiatric interview or self-rating assessment

procedures (Cytryn et al., 1982; Hammen et al., 1987; Hops et al., 1987; Lee & Gotlib, 1989; Zahn-Waxler et al., 1984). Although the same diagnostic procedure has not been employed by all studies it is reasonable to assume they are referring to a very similar clinically significant affective state.

Depressed Parent-child Dyads compared with Nondepressed Dyads

Billings and Moos (1983) compared parent-child triads of clinically depressed parents with a community control group. Parents were asked to rate their children, who ranged from newborn to 18 years of age, on rating scales that assessed physical and psychological variables, health risk and behavioural problems. The authors found that children of depressed parents had significantly more behaviour, physical and psychological problems. There were 26% of depressed families who had a child with significant emotional or behavioural problems compared with 3% of nondepressed families. Billings and Moos (1985a) conducted a one year follow-up study of this sample which compared children of control parents, depressed parents and previously depressed parents whose depression had remitted (i.e., parents whose depression had partially or entirely alleviated). Assessments covered the same areas as the initial study, and from these areas a child disturbance index was devised. Children of remitted parents were found to have lower levels of psychological, physical and behavioural problems compared with children of nonremitted parents. However the level of problems were still higher than the control group.

Weissman et al. (1984) compared parental assessments of 6 to 18 year old children of parents suffering from major depression with children of parents who had never had a psychiatric illness. Children of depressed parents were three times more likely to have a DSM-III

disorder. These children were also at increased risk for psychological symptoms, school problems and treatment for emotional problems. Weissman et al. (1987) followed this investigation with a study of a similar cohort (6-23 years) of children of depressed and nondepressed parents. Assessment procedures included clinical interviews and parent, teacher and self-reports. The authors reported that children of depressed parents had a significantly higher lifetime prevalence of depression, substance abuse and other DSM-III disorders. More specifically, lifetime prevalence of any diagnosis was found in 73% of the depressed parent proband compared with 65% of the nondepressed parent proband. Differences were more marked for particular disorders. For major depression the lifetime prevalence was 38% for the depressed proband compared with 24% for the nondepressed proband. Similarly, the lifetime prevalence of anxiety disorders was 37% for the depressed proband compared with 27% for the nondepressed proband, and of substance abuse 17% for the depressed proband compared with 7% for the nondepressed proband. Additionally, children of depressed parents had higher attention and learning disabilities and more emotional problems, hospitalisation and psychotherapy compared with the children of nondepressed parents. Lastly, children of depressed parents were at increased risk of a psychopathology regardless of the severity of the parents' depression.

More recently Caplan et al. (1989) compared mother-child dyads of depressed parents in a hospital setting with dyads of nondepressed mothers and children in the community. Children, all 4 years of age, were assessed for behavioural and emotional disorders. Information was also obtained from maternal interviews. The authors reported that current maternal depression was associated with independent and maternal ratings of children's behavioural and emotional problems.

Studies which have carried out home and laboratory observations also report significant differences between depressed mother-child dyads and nondepressed dyads. Zahn-Waxler et al. (1984) compared unipolar depressed mother-child dyads, and bipolar depressed[2] parent-child triads, with nondepressed parent-child triads. When children were 2 years old, laboratory observations of simulated mother-child and child-peer interactions were carried out. The authors reported that offspring of depressed parents evidenced more socio-emotional difficulties compared with children of nondepressed parents. Problematic behaviours included depressed symptoms, attachment problems, disregulation of emotion with both heightened and suppressed emotion, and although children of depressed parents were no more aggressive, their aggression was more intense. Zahn-Waxler (1987) carried out a follow up-study of these groups. Initial laboratory assessments were repeated when children were 5 years of age. When children were 6 years of age they returned for clinical assessment which included a structured psychiatric interview and maternal ratings of child behaviour. The author found that children with multiple problems at 6 years of age tended to have a depressed mother, and insecure attachments with the mother and often with the father. Zahn-Waxler concluded "that maternal depression was a major correlate of continuity of behaviour problems over time" (p. 9).

Hops et al. (1987) compared depressed mothers' family interaction patterns with the interaction patterns of families with nondepressed mothers. Families were observed in their own home on 10 occasions and interactions coded. Children were aged between 3 and 18 years. The

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[2] Bipolar depression referred to the occurrence of episodes of both depression and mania. Manic symptoms included hyperactivity, overtalkativeness, flight of ideas, inflated self-esteem, gradiosity and risk taking.

authors found that children of depressed mothers exhibited more aggressive behaviour compared with children of nondepressed mothers.

Depressed Parent-child Dyads compared with Nondepressed Dyads and Dyads with a Parent suffering from another Psychopathology

A number of studies have investigated whether the behavioural and emotional problems reported in offspring of depressed parents are specific to depression or consistent with behaviour problems found in children with a psychiatrically distressed parent. Hammen et al. (1987) assessed 8-16 year old children of four groups of mothers: bipolar depressed, unipolar depressed, nondepressed, and mothers with a chronic medical illness (i.e., arthritis or diabetes). Measures of child development included parental ratings of child behaviour and social competence, teacher ratings of child behaviour, and a clinical interview with the child. The child also completed a self-report depression inventory. The authors found that children of parents with unipolar depression had the highest levels of conduct problems, depression, and drug disorders. Additionally, whereas 85% of families with a unipolar depressed mother and 100% of families with bipolar depressed mother had at least one child with a current or previously diagnosed psychopathology only 57% of medically ill families and 36% of well families did. These differences were statistically significant.

Lee and Gotlib (1989) conducted a longitudinal study of dyads with a mother receiving treatment for major depression, a psychiatric illness other than depression, a medical illness, and mothers without a medical or psychiatric illness. Children were aged from 7 to 13 years old. Child functioning was assessed from clinical interviews with the child and mother, and from maternal ratings of child behaviour. The authors reported that compared with children of medically ill and

nondepressed nonmedically ill mothers, children with depressed mothers had a greater number of internalizing problems, such as a greater number of fears and mood disturbance. However, Lee and Gotlib reported there were no differences between children of depressed and nondepressed psychiatrically ill mothers. The authors proposed that child dysfunction was associated with psychological distress in general, rather than specifically depression.

Mother-child dyads involving a depressed mother have been compared with dyads involving a schizophrenic mother or a 'well' mother (Goodman, 1987; Goodman & Brumley, 1990). Goodman (1987) assessed dyads with children aged between birth and 5 years old. Maternal social competence, role functioning, and severity of a wide range of illnesses were assessed. Child assessment included I.Q., neuropsychiatry, physical health, temperament and social competence. Goodman reported that dyads involving a depressed or schizophrenic mother had deficits in their child-rearing environment. These mothers were less affectively involved and less responsive to their children, and their children were less socially competent. These early findings were confirmed by a later study which included laboratory observations of mother-child interactions (Goodman & Brumley, 1990). During these interactions, dyads with a schizophrenic or depressed mother displayed lower levels of affectional involvement and responsiveness, and more anger and hostility compared with 'well' dyads. This pattern of behaviour was strongest for dyads with a schizophrenic mother, with depressed-mother dyads ranked between schizophrenic and well mothers on most interaction variables.

Finally, Mc Knew et al. (1979) studied the offspring of unipolar and bipolar depressed inpatient parents. Children were between 5 to 14 years old. Child measures included parental ratings of child disturbance and two psychiatric interviews with the child conducted 4 months apart.

The authors reported that 23 of the 30 children in the study were depressed during at least one of the interviews. Although the authors failed to employ a control group, the results are consistent with other studies.

In summary, studies of clinically depressed parent-child dyads have reported higher levels of child behaviour problems in children of depressed parents compared with both medically ill and nonmedically nonpsychiatrically ill groups. This relationship has been reported in newborn babies to offspring 23 years of age. Furthermore, these findings include measures of maternal, teacher and clinical ratings, self-reports, and home and laboratory observations. Whether this relationship is specific to depression, or associated with general psychological distress is less clear. Regardless, studies have still reported that behaviour problems in children of clinically depressed parents are greater than those of medically ill, or nonmedically nonpsychiatrically ill parents. Considering the high prevalence of maternal depression, compared with other psychopathologies, this relationship warrants specific attention.

Children with Behaviour Problems

Maternal depression and child behaviour has been examined in mother-child dyads identified through children referred to psychiatric clinics for behavioural problems. Most of these studies have included less severe levels of depression by assessing the prevalence of depressive symptomatology.

Patterson's (1980) research involved the study and treatment of families with children exhibiting antisocial behaviour. The research included 150 children aged from 3 to 13 years, who, for the most part, were boys. Home observations of family interactions were carried out and mothers completed the Minnesota Multiphasic Personality

Inventory (MMPI). The author reported that mothers of children who exhibited antisocial behaviour consistently obtained higher scores on the MMPI depression subscale and almost all other MMPI subscales compared with mothers of children with 'normal' behaviour. Furthermore, following mothers' participation in programmes which involved training and supervision of child management skills there was significant decreases in their depression scores. In contrast to research which argued maternal depression causes child behaviour problems, Patterson argued that the behaviour problems were causally related to the mother's elevated depression scores. In particular, the author stated mother's depression is a concomitant of the high number of aversive events, and a comparatively low number of positive events she experiences in caring for a child with antisocial behaviour.

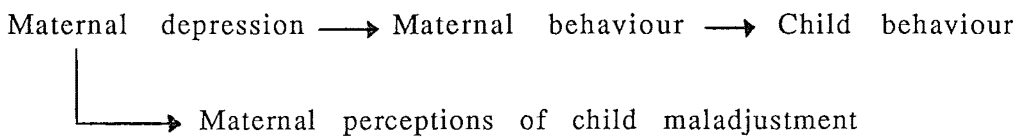
Patterson (1982) elaborated on this association in a subsequent, more detailed, analysis of coercive family process. In families with a child who exhibits antisocial behaviour mothers' provide the reactions which are crucial to the maintenance of high levels of coercive interchanges. Their "inept practice of family management skills produces increases in both crises and family conflicts, and ... these, in turn, produce an increase in caretaker depression" (p. 283). Patterson's arguments were supported by his findings that days characterised by a high number of aversive events were also days in which mother's rated themselves as more depressed and mother's depression scores were associated with mothers' involvement in child management training (Patterson, 1980). In addition, the link between mother's inability to control her children and maternal depression was consistent with Seligman's learned helplessness theory of depression.

Rickard, Forehand, Wells, Griest and McMahon (1981) were interested in why children who had nondeviant behaviour were referred to psychiatric clinics for behavioural problems. The authors

compared mother-child dyads of deviant and nondeviant clinic-referred children, and a nondeviant nonclinic-referred control group. The mean age of children in each group was between 4 and 5 years of age. Assessments included maternal ratings of child behaviour, maternal depressive symptomatology, and home observations of mother-child interactions. The authors reported that mothers of both clinic groups rated their children as similarly maladjusted, and significantly more so than the nonclinic group. Mothers of nondeviant clinic children were more depressed compared with mothers of deviant clinic and nondeviant nonclinic children, whereas poorer parenting skills were exhibited during home observations by mothers of deviant clinic children compared with the other two groups. The authors concluded that factors other than child behaviour, namely maternal depressive symptomatology and parenting behaviour, are responsible for maternal perceptions of child behaviour and child referrals to psychiatric clinics.

Forehand, Wells, McMahon, Griest and Rogers (1982) obtained ratings of depressive symptomatology, marital satisfaction and child behaviour from mothers of 3 to 7 year old children referred to a psychiatric clinic for noncompliant behaviour. The authors reported that maternal depression was the best predictor of maternal perception of child maladjustment. Further research by Forehand, Lautenschlager, Faust and Graziano (1986a) using path analysis confirmed the relationship between maternal depression and child behaviour. Using a procedure and subject group similar to the study by Forehand et al. (1982) the authors reported that maternal depressive symptomatology had a direct effect on maternal perception of child behaviour and an indirect effect on observed child behaviour through its influence on parenting behaviour.

These causal paths are illustrated in the diagram below:



Schaughency and Lahey (1985) assessed children aged between 5 and 14 years. Maternal ratings of depressive symptomatology were obtained and both parents completed ratings of marital adjustment and child behaviour. Ratings of child behaviour problems were also completed by the child's teacher. The authors found that maternal ratings of child behaviour were correlated with paternal and teacher ratings. In addition, stepwise multiple regression analysis revealed that maternal depressive symptomatology significantly contributed to the prediction of maternal ratings of child behaviour. Consistent with Forehand et al. (1982, 1986a) this finding suggests that the children of women with more prevalent depressive symptomatology are more likely to be perceived as being maladjusted.

Friedlander et al. (1986) compared mother-child dyads of 7 to 12 year old children referred to a psychiatric clinic, with children attending a medical clinic for a routine physical examination. Maternal ratings of depressive symptomatology and child behaviour were obtained. The authors reported that mothers of children referred for behavioural problems had higher levels of depressive symptomatology compared with nonreferred dyads and that maternal depressive symptomatology was a principal determinant for maternal ratings of child behaviour.

Recent studies have focused on specific types of child behaviour. Brody and Forehand (1986) assessed dyads referred to a psychology clinic for noncompliant behaviour problems exhibited by children aged 2 to 9 years old. Rating scales were used to obtain measures of maternal depressive symptomatology and perception of child behaviour. Home

observations of mother-child interactions were carried out to obtain measures of child compliance. The authors reported that a greater prevalence of maternal depressive symptomatology was associated with child maladjustment. In addition, analysis of variance revealed that children in a low compliance/high maternal depression group were perceived as being more maladjusted than children in low depression groups and a high compliance/high depression group. Brody and Forehand argued that this supported their hypothesis of an interaction effect between maternal depression and child behaviour in predicting maternal perceptions of child behaviour. Maternal depressive symptomatology, then, is most predictive of maternal ratings of child behaviour when accompanied by low levels of child compliance.

Dumas, Gibson and Albin (1989) assessed the relationship between mother-child dyads who took part in a home-based parent training programme. Children were aged between 2 and 9 years. Measures of maternal depressive symptomatology, stress, and perception of child behaviour were obtained. The authors reported that, after controlling for socio-economic disadvantage and maternal perception, maternal depression was associated with increased child compliance and decreased aversiveness.

In contrast, other research which has investigated dyads with recognised child behaviour problems has found that maternal depression and child behaviour are not related. Webster-Stratton (1988) obtained parental ratings of child behaviour, depressive symptomatology, marital adjustment, stress in the parent-child relationship and recent life events (parents were attending a Parenting Clinic for help with their conduct-problem children aged 3-8 years old). Further assessments included teacher ratings of child behaviour and home observations of parent-child interactions. The authors found that, other than with externalising behaviours, maternal and teacher ratings

of child behaviour were not significantly correlated, whereas paternal and teacher ratings were. Also, maternal perception of child deviance and observed child deviance were not significantly correlated. Finally, contrary to Schaughency and Lahey's (1986) findings, maternal depression was a better predictor of maternal ratings of child behaviour than teacher ratings of child behaviour.

Christensen, Phillips, Glasgow and Johnson (1983) examined this link in a group of self-referred families participating in a treatment programme for child behaviour problems. They found that parental ratings were not significantly correlated with children's observed behaviour or parental depressive symptomatology. However, parental ratings of child behaviour problems were positively related to marital discord, and parental negative behaviour.

Thus, for the most part, research which has identified dyads through children referred to psychiatric clinics has found that increases in maternal depressive symptomatology are associated with increases in maternal ratings of child behaviour problems. This association has been reported in children ranging from 2 to 14 years of age. However, while maternal perception of child behaviour and maternal depression are related, it is not yet clear if actual child behaviour or nonmaternal ratings of child behaviour are related to maternal depression.

Community Studies

The relationship between maternal depression and child development has been investigated in community groups. Cox et al's., (1987) study included all married mothers of 2 year old children in an urban working class area in London. The authors first interviewed mothers to assess their level of depression. Following this, two home observations were carried out with depressed mother-child dyads and with a group of nondepressed mother-child dyads. Assessment covered

child IQ, temperament and language development, and interactions were observed between the mother and child. The authors reported that depressed mother-child dyads exhibited low mutual affect and poor meshing (i.e., the failure of the mother to accurately interpret and appropriately respond to her infant's cues). Also, children of depressed mothers had higher rates of problems. The link between maternal depression and child problems was substantiated by the fact that child problems were reduced when the mother's depression was alleviated.

Longfellow and Szpiro (1983) interviewed a community sample of mother-child dyads from a low income area of Boston. The authors were concerned with how maternal depression and emotional well-being in children were related. During a 3-4 hour interview mothers completed a self-inventory of depressive symptoms and provided general information concerning their stress and well-being. Children, aged between 5 and 12 years, completed self-report scales on self-control, self-esteem, worries, and happiness in the parent-child relationship, and answered questions about their social support network. The authors found that children with depressed mothers had more behaviour problems, lower self-esteem, a more external locus of control, and rated their relationship with their mother more poorly. Longfellow and Szpiro also reported that a combined model of maternal depression and maternal support accounted for a significant proportion of variance in measures of children's well-being.

This line of investigation has been extended to include school behaviour with children aged between 11 and 15 years old. Forehand, Long, Brody and Faber (1986b) obtained parental measures of depressive symptomatology, combined parent-child ratings of home conflict, and parent ratings of the frequency of overt parental conflict that occurred in the child's presence. School measures included the child's grade point average and teacher ratings of child behaviour. The

authors found that teacher ratings of child conduct problems were positively correlated with maternal depressive symptomatology, and parent-child ratings of home conflict. In addition, stepwise regression analysis revealed that mother-child conflict ratings, gender of the child, and maternal depressive symptomatology accounted for 35% of variance in teacher ratings of child conduct behaviour problems.

As part of the Christchurch Child Development Study[3] Fergusson, Horwood and Shannon (1984) investigated the relationship between maternal depression, family life events and child rearing problems with 5 year old children. Mothers completed self-report inventories measuring depressive symptoms and life events, and were questioned about their children in a number of problem areas. The authors reported that depressive symptomatology increased with increases in child problems and with increases in the number of family life events, and child problems increased with increases in the number of family life events. Furthermore, multiple regression analysis revealed maternal depressive symptomatology was the best predictor of child-rearing problems. However, as child-rearing problems were assessed only by maternal ratings, the authors suggested that maternal misperception may have confounded findings, that is, mothers' depressed mood may have caused mothers to perceive their child negatively. Fergusson, Horwood, Gretton and Shannon (1985) followed up this sample one year later when children were 6 years old. In addition to maternal ratings of depressive symptoms and life events, ratings of child behaviour were obtained from the child's mother and teacher. As with Fergusson et al's. (1984) study, maternal depressive symptoms and maternal ratings of child behaviour problems were positively correlated as were family life

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[3] The Christchurch Child Development Study has assessed the development of a birth cohort of 1,265 children born in Christchurch, an urban region, between April 15 and August 5, 1977.

events and maternal depressive symptoms. Maternal and teacher ratings of child behaviour were also positively correlated. However, contrary to Forehand et al.'s (1986b) findings, maternal depressive symptoms were not correlated with teacher ratings (this discrepancy may be a function of the different ages of the children being assessed, i.e., 6 years compared with 11 to 15 years).

Fergusson et al. (1985) also reported that multiple regression analysis revealed that family life events and maternal depressive symptomatology were determinants of maternal ratings of child behaviour but long-term life events were the only determinant of teacher ratings of child behaviour. They argued that as maternal depression was not correlated with, or predictive of, independent ratings of child behaviour the perception bias hypothesis was supported.

In summary, several studies of community populations have found an association between maternal depression and child behaviour problems. These studies have included clinically significant depression, and clinical and nonclinical depressive symptomatology. Children have ranged in age between 2 and 15 years. While most studies have reported that maternal depressive symptomatology increased with increases in child behaviour problems a more recent study which included an independent measure of child behaviour suggested that this relationship may be an artifact of maternal perception bias.

Before concluding this section of the review of the link between maternal depression and child behaviour problems, the role of maternal perception will be given some consideration.

Maternal Perception Bias

Some researchers have concluded that the relationship between maternal depression and child behaviour problems is a consequence of depressed mothers' distorted perception. Researchers have found that

maternal depressive symptoms were not related to teacher ratings of child behaviour (Fergusson et al., 1985; Webster-Stratton, 1988) or observed child behaviour (Webster-Stratton, 1988). Also, contrary to Schaughency and Lahey's (1986) findings, research has found that maternal depression was a better predictor of maternal ratings of child behaviour compared with teacher ratings of child behaviour (Webster-Stratton, 1988) or observed child behaviour (Forehand et al., 1982). Research by Rickard et al. (1981) also seems to support the perception bias hypothesis. Mothers of nondeviant clinic children reported higher rates of depression compared with mothers of deviant clinic children and nondeviant nonclinic children, however, as Rickard et al. had matched nondeviant clinic and nonclinic children on noncompliant behaviour, comparison of observed child behaviour between these two groups was not very meaningful. Other studies which have not included an independent measure of child behaviour have been unable to determine the influence of maternal perception (Billing & Moos, 1983, 1985; Fergusson et al., 1984; Friedlander et al., 1986; Weissman et al., 1984).

There is substantial research in this area that suggests the relationship between maternal depression and child behaviour is more than an artifact of perception bias. Firstly, Richters and Pellegrini (1989) examined the depression-distortion hypothesis in mothers currently experiencing an episode of clinical depression, previously depressed mothers now in remission, and mothers with no history of psychiatric disorder. Maternal ratings of mood, feelings and child behaviour were obtained. Teacher ratings of child behaviour were also obtained using a parallel standardized instrument. The authors found that maternal and teacher ratings of child behaviour were moderately correlated. But more importantly, that mothers with a current or previous history of depression were no more likely to have a distorted view of their child's

behaviour than mothers with no history of a psychiatric disorder. Conrad and Hammen's (1989) study was also designed to specifically test for perception bias. They found that depressed women were in fact more accurate in their perception of children's behaviour, compared with nondepressed women! This applied whether depressed status was determined by clinical diagnosis or depressive symptomatology.

Secondly, research which has found that child behaviour problems are more common in children of clinically depressed parents compared with children of nondepressed parents has assessed child behaviour problems with procedures other than maternal ratings. These procedures include ratings by an independent interviewer (Caplan et al., 1989; Goodman, 1987; Goodman & Brumley, 1990), child self-reports and teacher ratings (Hammen et al., 1987), paternal ratings (Billings & Moos, 1985a; Webster-Stratton, 1988) a clinical interview with the child (Hammen et al., 1987; Lee & Gotlib, 1989; McKnew, 1979; Weissman et al., 1987) and home observations of child behaviour (Hops et al., 1987; Goodman & Brumley, 1990; Zahn-Waxler, 1984, 1987).

Thirdly, research with mother-child dyads referred to psychiatric clinics for child behaviour problems has reported that maternal ratings are positively correlated with both paternal and teacher ratings of child behaviour (Schaughency & Lahey, 1985). Also, maternal ratings of child behaviour were still predictive of a child's psychiatric status when controlled for maternal depression (Friedlander et al., 1986). Studies which included home observations offer further support. Brody and Forehand (1986) reported an interaction effect between maternal perception of child behaviour with maternal depression and observed child behaviour. Maternal depression was most predictive of maternal ratings of child behaviour when accompanied by low levels of child compliance. Dumas et al. (1989) reported that after controlling for socio-economic disadvantage and maternal perception, maternal depression

was still associated with increased child compliance and decreased aversiveness.

Fourthly, some community studies have found that the relationship between maternal depression and child behaviour occurs independently of maternal perception. This association has been reported in research which has utilised home observations (Cox et al., 1987), and child self-reports and teacher ratings (Longfellow & Szpiro, 1983).

Lastly, perhaps the most conclusive support comes from research that has utilised causal path analysis (Forehand et al., 1986a; Hammen, Burge & Stansbury, 1990). Forehand et al. (1986a) found that maternal depressive symptomatology had an indirect influence on child behaviour through maternal behaviour. Hammen et al. (1990) reported that maternal functioning, measured by maternal behaviour in home observations, social adjustment scores and maternal depressive symptomatology, had an effect on child outcome, measured by maternal ratings of child behaviour and social competence and an independent psychiatric diagnosis. Although, in both studies, other variables were related to child outcome a causal path from maternal depressive symptomatology to child outcome was identified.

In summary, there is substantial evidence from clinical and community studies that maternal depression and child behaviour problems are related. These studies have included measures of child behaviour other than maternal ratings and employed path analysis. The extent of these findings suggest that maternal misperception alone does not account for the fact that child behaviour problems are more common in children whose mother is depressed.

Summary and Conclusions

Researchers concerned with the relationship between maternal depression and child behaviour problems have consistently reported that children of depressed parents have higher rates, or are more at risk of child problems. This relationship has been reported in both clinical and community populations. Problems include externalising and internalizing behaviour problems, insecure attachment, poor meshing and low mutual affect, disregulation of emotion, child psychopathology, childhood depression, lower levels of social competence and self esteem, and drug problems. These associations have been reported with children ranging from newborn babies to offspring who were 23 years of age. Assessments have included home assessments, clinical interviews of the child and the mother, maternal and teacher ratings of child behaviour, and child self-reports. Some researchers have argued that as this link is only evidenced between maternal depression and maternal perception of child behaviour this relationship is an artifact of maternal perception bias. However, whereas this relationship may not be as strong when controlling for maternal perception, the range of independent measures of child behaviour, and research using causal path analysis, suggest maternal depression is associated with increased child behaviour problems.

SOCIAL SUPPORT AND MATERNAL DEPRESSION

Theoretical and empirical research has linked peoples' psychological well-being with their social supports including socio-emotional aspects of support, social network size, and social integration. There is some evidence that this association may be stronger for women than men (Miller & Ingham, 1976; Mueller, 1980; Thoits, 1982b). Research has also found that this relationship is confounded by stressful life events (Brown & Harris, 1978; Henderson & Byrne, 1981; Thoits,

1982a). However, other investigations have reported a link between social supports and depression even when controlling for life events (Solomon, 1985; Surtees, 1980; Turner, 1981; Warheit, 1979).

The following section will review literature pertaining to social support and depression. Differences in the conceptualisation of social support has meant the number of ways in which social support has been operationalised is almost as great as the number of definitions. Several researchers have discussed this problem (D'Arcy & Siddique, 1988; Kaplan, Cassel & Gore, 1977; Mueller, 1980; Thoits, 1982a). Kaplan et al. (1977) concluded that most research used the concept of social support as being the gratification of a person's basic social needs through interaction with other people. This conceptualisation has been recommended by Thoits (1982a) and is the one adopted by the present study. However, as this conceptualisation may not be applicable to every study discussed, to facilitate understanding where appropriate, and where possible, details of the specific aspects of social support being studied will be given. Also, while research has investigated psychological distress and general vulnerability to psychological distress, the relationship between social support and depression has often been specified and reported on. The following discussion will place a particular emphasis upon how findings relate to depression.

Reviews

Leavy (1983) reviewed 34 studies concerned with the association between social support and psychological disorders. Leavy concluded that regardless of whether research was concerned with the comparison of clinical and nonclinical populations, the study of clinical populations, or people experiencing a specific life stress "the absence of social supports is associated with increased psychological distress" (p. 15). In a review of literature concerned with psychosocial functioning and

depression, Barnett and Gotlib (1988) concluded that, even after controlling for concurrent symptoms of depression, both marital and extra-marital support played an important role in the etiology of depression. Mueller (1980) reviewed literature pertaining to social networks and psychiatric disorders. The author argued that "there is considerable evidence for a link between the lack of social support and psychiatric impairment. This is particularly true in the case of depression or depressive symptoms, and especially among women" (p. 153). Mueller also pointed out that there was ambiguity regarding the causal direction of effect with the possibility that people with psychological distress may drift towards specific types of networks (or lack of them), or alternatively, particular features of networks may cause the development of psychological distress.

Supportive Relationships

Research has examined how social support, as measured by the presence of a close confiding relationship, relates to psychological well-being (Brown & Harris, 1978; Miller & Ingham, 1976; Roy, 1978). Miller and Ingham (1976) investigated the link between physical and psychiatric symptoms and social support in patients consulting a general medical practice. For women, the presence of a close confidant, which could include a spouse, family member or close friend, was associated with lower levels of tiredness, anxiety and depressive symptoms. In addition, the presence of an acquaintance was associated with lower levels of depressive symptoms, tiredness, palpitations and breathlessness.

In their study of depression in urban working class women, Brown and Harris (1978) questioned women regarding the emotional and practical support they received while experiencing severe events or major difficulties in their lives. Across the total sample, the presence of

a close confidant was associated with reduced risk of depression in response to a provoking agent (i.e., life event or major difficulty). The authors reported that "intimacy acts a a powerful mediator between the provoking agents and (depression) onset .... low intimacy without a provoking agent was rarely associated with depression." (p. 176). Similarly, Roy (1978) found that 53% of depressed women reported a poor marriage and 38% reported a nonconfiding marriage. In contrast neither a poor or nonconfiding marriage was reported by any of the women in a nondepressed control group.

D'Arcy and Siddique (1984) examined the function of spousal and community support in a community sample of mothers. Spousal support was assessed by women's ratings of emotional support, sharing of interests, family satisfaction, consensus in family matters and sexual satisfaction and compatibility. Community support was assessed by ratings of satisfaction with social activities, local authorities, and community services. Ratings of better quality spousal and community support were negatively correlated with depressive symptomatology, with spousal support evidencing the strongest correlation for both groups.

Henderson, Byrne, Duncan-Jones, Adcock, Scott and Steele (1978) examined the link between neuroses and the availability and perceived adequacy of support in three types of relationships: close relationships, friends, and acquaintances. Subjects in a random community sample were required to complete self-report inventories measuring general psychiatric symptoms and the extent and adequacy of the three types of their relationships. A strong inverse correlation was reported between good quality social bonds and the presence of neurotic symptoms. This association was especially strong for close affectional ties. However, a more detailed investigation with a similar population that followed found that lack of close affectional ties was not correlated with greater

risk (Henderson & Byrne, 1981). In addition to previous measures, subjects completed a list of recent experiences. Only a weak association was found between a deficiency in social bonds and the development of psychiatric symptomatology. However, when accompanied by distressing experiences, the perceived adequacy of social supports had important predictive power in the development of anxiety and depressive symptoms.

Warr and Parry (1982) assessed the availability of emotional and instrumental support in a community sample of married women. Contrary to Henderson and Byrne's (1981) findings the authors found that lower levels of depressive symptomatology were associated with the increased availability of social support.

The link between social support and psychological well-being has been investigated from a social psychological perspective. Turner (1981) obtained data from four different groups: a voluntary community sample of mothers; mothers identified as having problems in the parenting role; men and women with adult-onset hearing loss; and psychotic inpatients involved in community placement programmes. Their definition of support was based on the conceptualisation that social support is based entirely on information the individual receives pertaining to the belief that she or he is cared for and loved, esteemed and valued, and belongs to a network of mutual communication and obligation upon which she or he can call should the need arise. Using a story-identification technique, social support was measured by seven sets of vignettes. Psychological well-being was measured across the dimensions of anxiety, anger/aggression, and depression. Turner reported social support and psychological well-being were related for all four groups. In particular, a reciprocal relationship was observed between the dimension of depression and social support. Turner also reported that social support was *most* important in times of high stress

for middle class people, but it was *only* important in times of high stress for lower class individuals. However, these interpretations were weakened by problems of multicollinearity[4].

Social Networks

Other research has focused on quantitative aspects of support such as network size and density, that is "the proportion of theoretically possible network links that actually exist" (Mueller, 1980, p. 149), reciprocity of contacts (i.e., whether the support function of the relationship was unidirectional or bidirectional), proximity (i.e., geographical distance of network members from the individual in question) and frequency of social contacts. These studies have examined both primary social networks which refer to direct links an individual has with other people, and secondary social networks which refer to indirect contacts that can be made through people in the primary network.

Pattison, Defrancisco, Wood, Frazier & Crowder (1980) compared primary social networks of neurotic and psychotic individuals and a normative community sample. The authors found that the primary networks of neurotic individuals were smaller in size, less interconnected, and relationships were rated more negatively, compared with controls. For psychotic individuals, primary networks were smaller than those of neurotics, although denser. Relationships were also less reciprocal. The smaller size of a neurotic individual's social network was confirmed by Henderson, Duncan-Jones, McAuley, and Ritchie (1978). The authors reported that compared with matched controls neurotic people had fewer close friends, and fewer contacts with people outside their household.

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[4] The strength of the correlation between the predictor variables may have violated the assumption that they were measuring independent concepts.

Cornelis, Armeling and de Jonghe (1989) compared life events and social networks in a group of clinically depressed outpatients with a nondepressed control group. Aspects of social network which were measured included size and proximity, the frequency of superficial (factual) as opposed to deep (emotional) social contacts, and the subject's perception of the quality of their social network. The authors reported that compared with nondepressed individuals, depressed patients had a poorer quality social network in that they had a smaller number of friends, friends who lived further away, and less frequent social contacts.

The relationship between remittance of unipolar depression and psychosocial factors (which included network size, availability of emotional and instrumental help, and the quality of a personally significant relationship) was investigated by Billings & Moos (1985b). They found that patients whose depressed symptoms had remitted also reported an improvement in their social supports, approaching the quality of social support of individuals in a matched community control group. In comparison, patients whose depression had not remitted reported no improvement in their social supports.

Thus, a link between good quality social support and lower rates of depression has been found in both community and clinical populations and with a number of different aspects of social support. However, there is some indication that this link exists only as a buffer which mediates against vulnerability to depression in the presence of stressful events. Research which has examined the role of stressful events in the relationship between social supports and depression will now be outlined to clarify whether, in fact, social supports have a relationship with depression independent of stressful events.

Social Support and Stressful Events

Stressful events and changes in social support have been said often to occur interdependently (Thoits, 1982a). The occurrence of many stressful events results in a change in social supports, for instance loss of a family member, marital conflict or employment change. In addition, a relationship between life events and depression has been reported (Fergusson & Horwood, 1984; Paykel, Myers, Dienelt, Klerman, Lindenthal & Pepper, 1969). Research has also found an interaction between social support and stressful events in relation to psychological well-being. In his work on support systems and community mental health Caplan (1974) found

> individual responses during crises ... (that) ... repeatedly demonstrate the outcome is influenced not only by the nature and vicissitudes of the stress and by the current ego strength of the individual, but, most important, by the quality of the emotional support and task-oriented assistance provided by the social network within which that individual grapples with the crisis event (p. 4).

Researchers have also reported that the presence of a close confidant was only associated with depression in response to a provoking agent (Brown & Harris, 1978), perceived inadequacy of social supports was predictive of the development of neuroses when accompanied with distressing experiences (Henderson & Byrne,1981), and social support was important in mitigating against the development of depressive symptoms in times of high stress for both women and men (Turner, 1981).

The interaction between social support and stressful life events as they impact on an individual's psychological well-being is further clarified by research specifically designed to investigate whether social support and life events have an independent or interactive relationship with depression. Warheit (1979) investigated the relationship between

personal coping resources, life events that were characterised by a loss, and depressive symptomatology in a community sample of adults. Subjects completed a questionnaire which assessed physical and mental well-being, utilization of health services, demographic variables and personal, family and social resources. Three years later a subsample of the initial group completed the questionnaire again plus a life events schedule. Warheit found that the high loss group had the highest levels of depressive symptomatology regardless of personal coping resources but the presence of specific coping resources, namely a spouse or friend, lessened the impact of high loss events. More importantly, regression analysis revealed that personal coping resources accounted for a significant proportion of the variance in depressive symptomatology three years later, beyond that which was accounted for by loss events.

Aneshensal and Stone (1982) tested the hypothesis that social support acts as a buffer against the onset of depression following a stressful event. Measures of actual and perceived social support, depressive symptomatology, and stress (measured by the number of lifetime event losses and a strain index) were obtained from a community sample. The authors found that depressive symptomatology increased as the number of life event losses and strain increased and as the amount of social support decreased. In addition, regression analysis revealed that social support predicted depressive symptomatology independent of the predictive power of life event losses and strain.

Thoits (1982b) investigated life stress, social supports and psychological vulnerability in a community sample. Four areas of social support were assessed, one pertaining to emotional support within close relationships, the other three to social integration. Psychological distress was measured by a scale which covered anxiety, psychosomatic and depressive symptoms. Information about life stress and socio-demographic variables was also obtained. Findings only partially

supported the relationship between social support and psychological well-being. Thoits reported that working class men and women, married women and unmarried individuals, with low levels of social integration were more psychologically vulnerable in reaction to specific types of stress. However, this relationship was not evident in their counterparts, that is, people in middle and higher socio-economic groups, married men and married individuals.

A longitudinal study which examined the relationship between changes in social support and psychological distress was carried out by Holahan & Moos (1981). Assessment included self-reports of the quality of friendship and work relationships, frequency of social contacts, availability of emotional support, social network size, negative life events, and depressive and psychosomatic symptoms. Self-report inventories were completed on two occasions one year apart. The authors found that even when controlling for the initial levels of maladjustment and life events, improvements in social support were predictive of decreases in depressive symptomatology.

Monroe, Bromet, Connel and Steiner (1986) conducted a one year prospective study investigating the relationship between spousal support, life events, and depressive symptoms in a community sample of married women. They found that when the initial level of depressive symptomatology was controlled, marital support and life events were not predictive of depressive symptomatology. However, for the subgroup of women who reported few depressive symptoms at the initial interview, lack of marital support was a significant predictor of depressive symptomatology independent of life events' predictive power.

The relationship between social supports and psychological well-being has also been investigated in a clinical population. Surtees (1980) conducted a longitudinal study of the relationship between social

support, residual adversity and symptom severity in patients' recovery from, and outcome of, a depressive illness. Surtees obtained information on both qualitative and quantitative aspects of close and diffuse relationships. Surtees reported firstly, that patients with close and reciprocal confiding relationships had less severe symptoms at follow-up. Secondly, patients with at least some diffuse or close support had significantly less severe symptoms at follow-up compared with those who had no support. Also, a close and confiding relationship protected patients from developing symptoms in response to high stress for those patients with high levels of residual adversity and, while not critical, was important for patients with low residual adversity.

Specific Stressful Events

The interaction between social support, a specific stressful event, and depression has also been examined. Solomon (1985) conducted a longitudinal study of affective disorders and social support in a group of women who had been exposed to a nuclear accident compared with women not exposed to the nuclear accident. The expressive and instrumental support women received from their social network was assessed. Only the availability of expressive support was associated with a decreased likelihood that women would have a major depressive illness. More importantly, this association occurred irrespective of whether the stressful event was experienced.

A prospective study of the relationship between social support, depressive symptomatology and stress was carried out by Brown, Wallston and Nicassio (1989). Stress was measured in terms of the varying levels of pain and functional impairment caused by rheumatoid arthritis. Participants completed ratings of the extent of social contact, emotional support and depressive symptomatology. The authors found that both higher levels of arthritic pain and lower levels of social

support were causally related to an increase in depressive symptoms. Also, social support had an independent causal link with depressive symptomatology. Lastly, while social support had a buffering effect on depressive symptomatology when subjects were experiencing high levels of pain, this effect did not continue over the 6 months of the study.

Thus, there is growing evidence that the capacity of social support to mitigate depression does not only occur in conjunction with stressful events but independently of the presence of stressful life events.

Summary and Conclusions

There is therefore, a substantial body of research which confirms the negative association between social support and depression. Specific aspects of social support (or it's lack), which have been associated with vulnerability to depression include expressive, emotional, community and spousal support and network size. This association has been reported in both community and clinical populations, and with both clinical depression and depressive symptomatology.

Social integration, emotional support and the extent of social contacts have been found to interact with stressful events. This interaction suggests that social support may act as a mediator protecting individuals from the onset of depression in times of high stress, especially for women and individuals with a low income. The buffering effect of social support may also depend on previous level of depressive symptomatology.

More importantly, social support appears to be related to depression independent of stressful events. Good quality close relationships, the availability of emotional support, more frequent social contacts and support perceived as better quality by the focal individuals

are all associated with lower levels of depressive symptomatology regardless of the life events experienced by individuals.

MATERNAL SOCIAL SUPPORT AND CHILD BEHAVIOUR PROBLEMS

In contrast to studies pertaining to the link between maternal depression and child behaviour problems, and social support and depression, the relationship between maternal social support and child behaviour problems has not been extensively researched. Specific areas which have been explored include the relationship between maternal social support and infant behaviour, mothers' social interactions in the community and child behaviour problems, and theoretical research concerned with the role of social networks in child development. Research concerned with the marital relationship and child behaviour provides indirect support for the link between maternal social supports and child behaviour problems. The following section outlines this research.

Maternal Social Support and Infant Behaviour

Research has found that maternal social support is related to the security of the infant-mother attachment. Crockenberg (1981) observed attachment behaviour during a simulated mother-infant interaction and obtained maternal ratings of emotional and instrumental support. This author found that low social support was associated with high resistance, avoidance and anxious infant behaviour. Crittenden (1985) supported this finding in a study of maltreating and nonmaltreating mother-infant dyads. Crittenden obtained demographic information about the mother and assessed the mother's social support. Infant attachment was assessed during laboratory observations. Multiple regression analysis revealed that support variables were predictive of

the security of the infant's attachment to it's mother. In particular, mothers with short-term friendships and frequent contact with relatives, and mothers who were dissatisfied with the dependability of their supports were more likely to have infants with insecure attachment.

Social support has also been associated with negative behaviour when young children interact with peers. In a one-year prospective study of the determinants of social competence in preschoolers, Lamb, Hwang, Bookstein, Broberg, Hult and Frodi (1988) observed peer interactions in infants 11 to 29 months old. Determinant variables included parents' perceived amount of social support, infant difficulty, home background, father's involvement with the child, whether the child was in day care, and the child's prior social skills. The most predictive model of infants' negative peer behaviours incorporated parental ratings of support received from grandparents, friends and neighbours, and infants' prior social skills and age. These variables together accounted for 39% of variance in social competence. Furthermore, when variables in this model were considered separately, support measures accounted for the greatest proportion of variance (29%).

Maternal Insularity and Child Behaviour Problems

One aspect of social support which has been investigated in relation to child behaviour is maternal insularity. Insularity refers to

> a specific pattern of social contacts within the community that is characterised by a high level of negatively perceived coercive interchanges[5] with relatives and/or helping agency representatives and by a low level of positively supportive interchanges with friends (Wahler & Dumas, 1984, p. 387).

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[5] In this context coercive interchanges refers to sequences of behaviour which are characteristically aversive and/or aggressive in nature, often escalating in intensity, and generally stimulated by a mand (i.e., demand) (Wahler, et al., 1979).

This research has focused upon mother-child dyads participating in behaviour modification programmes aimed at reducing oppositional child behaviour through changing patterns of child-mother interaction. Children have ranged from 14 months to 12 years old.

During an investigation of the high rate of treatment failure in parent-training programmes, Wahler et al. (1979) found that minimal, if any changes in child behaviour were evidenced in families with specific social and demographic characteristics. These characteristics were poverty, poor education, single parent status, residence in a high crime area, having crowded living conditions, and being referred for help by an extrafamilial party. Also, by the end of the first year, every family with these characteristics had dropped out of the programme. Further investigation revealed that mothers in these families had fewer total and self-initiated social contacts, fewer contacts with friends but more frequent contacts with relatives or helping agencies. Additionally, their contacts with friends tended to be rated positively, while contacts with relatives and helping agency representatives were rated negatively (Wahler et al., 1979). A further study found that whereas dyads with characteristics associated with treatment failure improved during the treatment phase, changes in mother-child behaviour failed to persist in follow-up (Wahler, 1980a).

That the presence of socio-economic disadvantage and/or insularity increases the likelihood of treatment failure was confirmed by subsequent research (Dumas & Wahler, 1983). Using stepwise discriminant analysis Dumas and Wahler revealed that socio-economic disadvantage, determined by family income, maternal education, family composition, family size, and area of residence; and insularity (i.e., the total number of, relationship with, and perceived valence of contacts) together accounted for 49% of the variance in treatment success.

Specific behaviours have been associated with certain aspects of maternal insularity. Wahler (1980a) found that during baseline and follow-up phases, children's oppositional behaviour and mothers' aversive child-directed behaviour occurred more frequently on low friendship days compared with high friendship days. Also, Dumas (1986) found that mothers were more likely to exhibit child-directed aversive behaviour when they had experienced high levels of negative contacts with adults in the community. This occurred regardless of the child's behaviour. Furthermore, while negative community interactions had a facilitating effect on mothers aversive behaviour, positive contacts had an inhibitory effect.

Thus, it appears that child conduct problems are maintained by insularity in a number of ways. Firstly, the type of relationship mothers have with contacts is linked with an increase in children's oppositional behaviour. Secondly, mothers' number of contacts, their relationship with the contacts, and how they perceive these contacts all are associated with the mothers' child-directed behaviour. As such, insularity may indirectly effect child conduct problems since the mother's aversive behaviour may act as an antecedent to children's aversive behaviour as is suggested by Forehand et al. (1986a).

Theoretical Research

Cochran and Brassard (1979), in a review of child development and social networks, assessed the social ecology of the parent and the child. They stated that parental networks impact on children's development directly through the range and variety of people children come into contact with, and indirectly through the influences that network members have on parents as developing individuals. The parent-child relationship is influenced by the role of social contacts as sources of information, stimulation and opportunity, and as role models

for both the parent and child. In addition, the performance of the parental role is affected by the availability of emotional and material assistance from the social network.

The relationship between maternal social support and child development is, in general, supported by such proponents of ecological models of child development (Brofenbrenner, 1986; Salzinger, Antrobus & Glick, 1980). In ecological models "the child and environment constitute a system, an ecosystem of which feedback is a central characteristic" (Salzinger et al., 1980, p. 3). Parental social networks and support are important as

> the psychological development of children in the family is affected not only by what happens in the other environments in which children spend their time but also by what occurs in the other settings in which their parents live their lives. (Brofenbrenner, 1986, p. 723).

The Marital Relationship and Child Behaviour

The marital relationship is one of the closest relationships a woman may have, and as such, potentially one of her major sources of support. Thus, indirect support for the association between maternal social support and child behaviour problems is given from research concerned with the marital relationship and child behaviour. Research in this area has reported that child behaviour problems occur more frequently in families with marital problems (Emery, 1982). This pattern of association has also been found with marital distress and maternal perceptions of child behaviour problems (Bond & McMahon, 1984), severe marital discord and the prevalence of psychiatric disorder in children (Rutter, 1971), and partner hostility and child behaviour problems in boys (Porter & O'Leary, 1980). In addition, increases in marital satisfaction and increases in observed levels of child deviance are reported to be negatively correlated (Johnson & Lobitz, 1974).

Summary and Conclusions

As yet research concerned with the association between maternal social supports and child behaviour problems is limited. In particular, research has reported maternal social support and infant attachment and negative peer behaviour are related as are mothers' types of social contacts in the community and oppositional child behaviour. Also, maternal social supports and child development have been linked in ecological models of human development. Finally, the reported association between the level of conflict in martial relationships and child behaviour problems offers indirect support for the conclusion that maternal social supports and child behaviour problems are related.

MATERNAL DEPRESSION, MATERNAL SOCIAL SUPPORTS AND CHILD BEHAVIOUR PROBLEMS

In response to the observed links between maternal depression and child behaviour problems, maternal depression and social supports, and maternal social supports and child behaviour problems, research has begun to explore the interrelationship between maternal depression, child behaviour problems and maternal social supports. The largest part of this research has been concerned with social support within the family such as family communication or support, the quality of the marital relationship, and extended family support. Extrafamilial support has been investigated in relation to emotional support received from family and friends, and maternal insularity. These studies are outlined in the following discussion.

Intrafamilial Support

In their investigation of children of depressed and nondepressed parents Billings and Moos (1983) included assessments of parental resources and supports. The Family Environment Scale was used to

obtain information regarding the family milieu and the Health and Daily Living Form to obtain information concerning social resources. The authors found that depressed families were less cohesive and experienced greater conflict compared with nondepressed families. Additionally, stepwise multiple regression analysis revealed that low family support significantly added to the prediction of the level of child disturbance in addition to that which was predicted by the presence of a depressed parent and the family's level of stress. These authors argued that supportive family resources may function protectively against the development of child disturbance.

One year later, nonremitted depressed parents were found to have less supportive relationships with their spouse or other significant persons, more family arguments and a more negatively perceived family environment compared with remitted depressed parents (Billings & Moos, 1985a). At the same time, children of nonremitted parents had higher levels of behaviour disturbance compared with children whose parents' depression had remitted. The predictive power of the family environment was emphasised, since this study found that the less supportive relationships measured in the first study were now associated with poorer child functioning one year later.

Fendrich, Warner and Weissman (1990) investigated the association between family risk factors and psychopathology in children of depressed and nondepressed parents. Diagnoses of parental depression and child psychopathology were made on the basis of clinical diagnostic tools (DSM-III). Family risk factors included parental ratings of marital adjustment and parent-child discord, child ratings of family cohesion and affectionless control by a parent, and children's exposure to parental divorce. The authors reported that children of depressed parents had a higher rate of exposure to parental divorce and parents with poorer marital adjustment, and were more likely to report low

family cohesion and an affectionless control. Overall, family risk factors were important in predicting a diagnosis of major childhood depression and conduct disorder (or any diagnosis). However, when children were grouped according to parents' depression status, family risk factors of children with a depressed parent were only important in the prediction of a conduct disorder. In contrast, family risk factors were predictive of major childhood depression, conduct disorders and of any diagnostic category at all for children of nondepressed parents.

The ways in which marital satisfaction interacts with maternal depression and child behaviour problems has been investigated by two studies concerned with depressed parents and their children. In a longitudinal study of maternal depression and the emotional development of the child Caplan et al. (1989) included assessments of marital adjustment at the time of pregnancy and when the child was 4 years old. Marital disharmony was positively correlated with increases in maternal ratings of child problems. Additionally, stepwise regression analysis revealed that the most predictive model for independent ratings of child behaviour included husbands' psychiatric history, marital conflict during pregnancy, and current level of depression. Together, these variables accounted for 40% of the variance.

During their home observations of depressed and nondepressed mothers and their children Hops et al. (1987) compared depressed families without marital distress with depressed plus maritally distressed families. They found "considerable evidence for the additional impact of marital distress on interactive difficulties in the family relationships of depressed women" (p. 345). In the latter group, mothers' caring affect was less likely to reduce the fathers' aggressive affect, fathers were less likely to show caring affect towards their children, and mothers' happy affect was more likely to suppress children's aggressive responding.

Pound, Cox, Puckering and Mills' (1985) investigated the quality of the marital relationship and child problems reported by depressed mothers in a community sample. The authors found significant correlations between poorer quality marriages and high levels of child problems. However, further investigation found this association to be significant only at first interview and not at the 6 month follow-up (Cox et al., 1987).

Marital satisfaction has also been assessed in research concerned with parent-child dyads with recognised child behaviour problems. Several studies have found that maternal ratings of marital satisfaction were not significantly related to maternal ratings of child behaviour (Forehand et al., 1982; Schaughency & Lahey, 1985; Webster-Stratton, 1988).

In contrast Christensen et al. (1983) reported that parents' ratings of increased marital satisfaction were inversely related to increases in ratings of child behaviour problems, whereas increases in parental depression were not. However, the variables used were combined indices of maternal and paternal ratings. Separate analysis of maternal and paternal ratings may have obtained different results.

Intrafamilial and Extrafamilial Social Support

Maternal social supports, maternal depression and child behaviour have been investigated in two community studies. Williams and Carmichael (1985) examined the role of social support, maternal depression and child problems in women in Melbourne. Children were aged 42 to 44 months. A semi-structured interview with the mother was used to assess mother's depressed mood, life events, childhood experiences, isolation in the home, country of birth, emotional support received from family and friends, and perception of child behaviour. Additional child behaviour ratings were based on interviewers'

observations of the children during home visits. The authors stated that, of the variables assessed, social supports were of greatest importance in preventing maternal depression and child behaviour problems. Specific findings included that all the children with severe behavioural problems had depressed mothers whereas only 16% of children reported to have no or minimal behavioural problems had depressed mothers. Only 23% of depressed women had husbands who were a good support compared with 65% of nondepressed women, and 49% of depressed women were *very* isolated in the home whereas no nondepressed women were.

A longitudinal study with a random community sample of mother-child dyads was carried out by Ghodsian, Zajicek and Wolkind (1985). They assessed women's social and family circumstances, depressed status, and child behaviour. Information was obtained from semi-structured interviews with the mother when the child was 14, 27 and 42 months. The authors reported that mothers of children with more problematic behaviour were more likely to be depressed, have a poor relationship with their partner and mother, and less contact with friends compared with mothers of children with less problematic behaviour. This pattern of associations was only found when the child was 42 months old.

Extrafamilial Support

Zahn-Waxler (1987) stated that compared with mothers of 6 year old children without behaviour problems, mothers of children with problem behaviours were not only more likely to be depressed, but also tended to have restricted and dysfunctional social networks. In particular, these mothers had fewer friends, and more often had friends with emotional problems.

Johnson and Pelham (1990) looked at the mother-child relationship with 4 to 12 year old children with externalising disorders (diagnosed according to DSM-III criteria). Mothers completed ratings of depressive symptomatology, quality of social supports, and child behaviour. The authors also obtained teacher ratings of child behaviour and observed mother-child interactions. Maternal depressive symptomatology was found to be related to observed child behaviour while the quality of maternal social supports was not. Somewhat surprisingly, no significant correlations were obtained between maternal and teacher ratings of child behaviour or maternal ratings of depressive symptomatology and social support.

Social support given to depressed mothers of 'high risk' infants (i.e., at risk for insecure mother-child attachment) has been reported to be a mediating factor in the development of insecure attachment (Lyons-Ruth, Connell, Grunebaum & Botein, 1990). Over a period of 18 months a sample of 'high risk' mothers received home visits aimed at providing a close supportive relationship, informational support, appropriate role modelling, reinforcement of caregiver-infant behaviour, and reducing mothers' social isolation. Measures of mothers' depressive symptomatology were obtained at intake and at the end of the programme and infant security was rated on the basis of observed mother-child interactions. At the end of the programme the authors compared the infant attachment behaviour of infants of 'high risk' mothers receiving social support, 'high risk' mothers not receiving social support and a community control group. Lyons-Ruth et al. reported that 'high risk' infants receiving home visits were twice as likely to be securely attached in their relationships compared with 'high risk' infants who did not receive home visits, and were just as likely to be securely attached as infants in the community sample. Furthermore, infants of depressed mothers who received treatment intervention were twice as

likely to be securely attached as infants of depressed mothers in both the untreated 'high risk' and community groups.

A recent study of maternal insularity and child behaviour has included measures of maternal depressive symptomatology (Panaccione & Wahler, 1986). The study assessed mother-child dyads with socio-demographic characteristics associated with maternal insularity. Mother-child interactions were observed in the home on three to five occasions. In addition, mothers completed ratings of their community interactions, depressive symptomatology, and their child's behaviour during the observation period. The authors reported that maternal depression was associated with maternal perception of child misbehaviour but not the child's actual behaviour. Secondly, the aversiveness of maternal contacts was associated with maternal depressive symptomatology. This meant that the more depressed a mother the more aversively she perceived her child and the more aversively she behaved towards it. Multiple regression analysis revealed that the most important variables in predicting maternal ratings of child behaviour were maternal depressive symptomatology, mother's child-directed aversive behaviour, and the number and valence of maternal social contacts. This suggests that both maternal insularity and maternal depression are related to maternal perception of child behaviour.

As part of ongoing research concerned with marital separation and child deviancy, Patterson and Forgatch (1990) reported on the association between maternal stress, social supports and depression and behaviour of boys aged between 6-12 years in 194 families in which the parents had recently separated. Mother's provided information regarding their depressed mood, stress, irritability, social supports and perception of their child's behaviour. Measures of child behaviour were also obtained from interviews with the child. The authors reported that

during the first and second years after marital satisfaction increased levels of stress and decreased availability of social support contributed to increases in maternal depression. Maternal irritability was a concomitant of both increased stress and decreased availability of social support and mediated in the reciprocal association between maternal stress and child behaviour (i.e., increased maternal irritability was linked to increased levels of antisocial child behaviour which in turn contributed to high levels of maternal stress). This association was most evident in discipline confrontation between the mother and son. While findings concerned with the link between maternal depression and social supports and antisocial child behaviour have yet to be reported on the present findings suggest that, as concomitants of increased levels of maternal stress, increases in maternal depression and decreases in the availability of maternal social supports may contribute to increases in antisocial child behaviour, with maternal irritability playing a key mediating role in this interrelationship.

Summary and Conclusions

Presently, research investigating the relationship between maternal social supports, maternal depression, and child behaviour problems has reported that family cohesion, emotional support and maternal insularity are interrelated with maternal depression and child behaviour problems. Findings pertaining to marital adjustment have been less consistent. However, as yet, this research is very limited. Studies have predominantly been concerned with clinical depression, in some instances with child psychopathology, and with only limited aspects of social support.

SUMMARY

Research has consistently reported that children of depressed parents experience higher rates of, or are more at risk for, child behaviour problems. This association has been reported in both clinical and community populations. Additionally, increases in maternal depressive symptomatology have been found to have a positive linear relationship with increases in child behaviour problems in both community populations and dyads with child conduct problems. Although this relationship may not be as strong when controlling for maternal perception of child behaviour, the range of independent measures of child behaviour, and studies using causal path analysis, suggest that maternal depression is related to child behaviour problems.

Additionally, there is a substantive body of research that confirms the association between social support and depression. In general the availability of quality social supports is associated with lower rates of depression and depressive symptoms. This link has been found in community and clinical populations. Stressful events often occur in conjunction with this relationship. However, research has found that social support and depression are related independently of the occurrence of stressful events.

Research concerned with the relationship between maternal social supports and child behaviour problems is less comprehensive. However, the availability of better quality social supports is linked with secure infant attachment and more positive infant behaviour with peers. An association has also been reported between increased oppositional child behaviour in children of insular mothers. The trend of these findings suggests that the availability of quality social supports may be associated with fewer child behaviour problems.

Finally, whilst these three variables have been found to interact when paired, as yet there is limited research that has attempted to look

at how maternal social supports, maternal depression, and child behaviour co-exist. To date, studies have found that maternal depression, child behaviour problems, the marital relationship, family cohesion, emotional support and maternal insularity are interrelated. In general, the combined presence of any two of poor quality social supports, maternal depression, or child behaviour problems is associated with the presence of the third variable. Also, increases in these variables generally have a positive linear relationship with increases in the third variable. However, this research has predominantly been concerned with clinical depression, and in some instances child psychopathology. Extrafamilial emotional support has only been investigated in regard to clinical depression in mothers of preschool children or with maternal depressive symptomatology and children's externalizing disorders. Maternal depressive symptomatology has only been investigated in regard to maternal insularity and child behaviour.

WOMEN WHO ARE PARENTING ALONE

Overseas research has generally reported that marital status, by itself, is not predictive of child behaviour problems (Kruk & Wolkind, 1983; Rutter, 1971) and that single women are less at risk for depression compared with married women (Weissman & Klerman, 1977). Nevertheless, women parenting alone remain vulnerable to depression, persistent child behaviour problems and insularity because of the socio-demographic factors that are associated with sole-parent families. Firstly, Fergusson et al. (1981a) found that women parenting on their own reported more stressful life events which are known to be depressogenic. Secondly, Wahler and his colleagues have found that treatment failure for children with behaviour problems is more likely to occur in single parent families. These single mothers are also more likely to be insular (Wahler et al., 1979; Wahler, 1980a; Dumas & Wahler,

1983). Despite this trend, research concerned with the mother-child relationship has largely neglected those family units in which mothers parent on their own.

Over the last few decades the proportion of sole-parent families has been rapidly increasing. In New Zealand one in five families with children is a sole-parent family. This phenomena is the result of a growing number of unmarried, separated, divorced and widowed parents who raise their children on their own [84% of sole-parents are women (Department of Statistics, 1989b)].

This trend has meant that the traditional nuclear family is not the only prevalent type of family unit within which a New Zealand child may develop. Recent New Zealand research has documented that 16% of all dependent children live in sole-parent families. In addition, half of all children will have some experience of a single parent family by the age of 16 years (Fergusson, 1987). However, while sole-parent families account for a substantial proportion of New Zealand families, at present there exists little research about these families. Two notable exceptions are studies by the Society for Research on Women (SROW: 1975) and Ritchie (1980).

A comprehensive study of 319 'solo mothers' was carried out in Christchurch (SROW, 1975). Information was obtained concerning women's income, employment, housing, emotional and physical health, personal relationships, activities outside the home, and general welfare of their children. SROW found that, for the most part, women parenting alone survived on a low income. This income was mainly earned by women's involvement in paid employment, although almost half had been dependent on government support at some time. Women tended to feel restricted in their ability to take part in activities outside the home. Also, half the women had been treated for mental, psychological or emotional disorders.

Ritchie (1980) surveyed the social characteristics of 158 'solo mothers' in Hamilton. Issues that were highlighted included the women's financial hardship (although many previously married women felt they were managing better financially compared with when they were married). A high proportion of women had suffered from emotional problems (75%) and health problems (66%). Greater freedom and independence were considered advantages of parenting alone, and loneliness and the responsibility for the family disadvantages. In conclusion Ritchie stated that the sample of 'solo mothers' were coping well.

However, although both of these studies are commendable for providing much needed information about 'solo mothers' in New Zealand, they were carried out 10 to 15 years ago, so the relevance of findings to women parenting alone in the 1990's is unknown.

Current demographic statistics and the research that has been conducted to date indicate that living in a sole-parent family in New Zealand is associated with a greater number of social and economic disadvantages than is characteristic of dual-parent families. In 1986 the median income of a sole-parent family was only 41% of that of a dual-parent family. Women parenting alone were especially disadvantaged in regards to income, with the median income for women parenting alone 43% below the median for men parenting alone (Department of Statistics: Ministry of Women's Affairs, 1990). Additionally, at all stages of the life-cycle, women parenting on their own have a mean income amounting to little more than half that of two-parent families (Mowbray & Khan, 1984). Men or women parenting alone are less likely to be owners of their own homes (Carmichael, 1983), with twice as many renting accommodation, and three times as many sharing their accommodation with other people (Department of Statistics, 1989b). Sole-parent families have also been reported to have higher residential

mobility, more stressful life events and lower satisfaction with life in general (Fergusson et al., 1981). Also, contrary to overseas findings, local research has found that mothers of children born into sole-parent families reported more child-rearing problems (Fergusson et al., 1981a).

Thus, the socio-demographic factors associated with sole-parent families place New Zealand women parenting alone at risk for depression, child behaviour problems, and low levels of social support. These women represent a substantial proportion of New Zealand families, yet there has been limited research concerned with this group.

RATIONALE FOR THE PRESENT STUDY

In broad terms, an increased awareness of how maternal depression, maternal social support, and child behaviour problems interact is important for understanding the etiology of, and enhancing treatment efficacy for, depression and child behaviour problems. Fortunately, there is a large body of research that has contributed to this knowledge. The above review outlines the substantive evidence for believing that maternal depression, maternal social supports, and child behaviour problems are related. However, although these variables have been found to be linked, as yet there have been few investigations which have explored the interrelationship between all three variables. The current study aims to complement existing research by examining the interrelationship between maternal depressive symptomatology, extrafamilial maternal social supports, and maternal ratings of child behaviour in a New Zealand context.

The rationale for examining the interrelationship between these three variables in a community sample of women parenting alone is two-fold. Firstly, as only a small number of studies exist about women parenting on their own, it was considered important to obtain

demographic information in order to be able to provide a more descriptive picture of women parenting on their own in New Zealand.

Secondly, according to research, women parenting alone who have children with behaviour problems are also more likely to be insular (Wahler et al., 1979; Wahler, 1980a; Dumas & Wahler, 1983). The present study was intended to investigate insularity in a volunteer community sample rather than in families reporting child behaviour problems. It will also illustrate how applicable this pattern of behaviour is in the New Zealand context, a finding which has implications for practices concerned with parent education.

Lastly, it is important to realise that most research has been conducted on overseas populations. By studying these relationships in a local context the current study will help determine the relevance of overseas findings in New Zealand. Findings may either support the universality of these relationships, or show their cultural and/or geographic specificity.

Aims of the Present Study

As a piece of research in an area that has received little attention the aims were more exploratory than explanatory. Existing research has generated several hypotheses which were to be tested although other findings were also to be reported on. Aims and respective hypotheses are outlined below.

Aims

1. To gather information about social and psychological characteristics of women who are parenting alone. The inclusion criteria, namely women who are sole parents of more than one child, will also enable the examination of the effect sibling order has on maternal ratings of child behaviour.

Hypothesis:

i) As a 'high risk' group, women parenting alone will evidence in insularity as defined by Wahler and Dumas (1984).

2. To examine the relationship between maternal depressive symptomatology, maternal social supports, and maternal and teacher ratings of child behaviour in a community sample of women parenting alone.

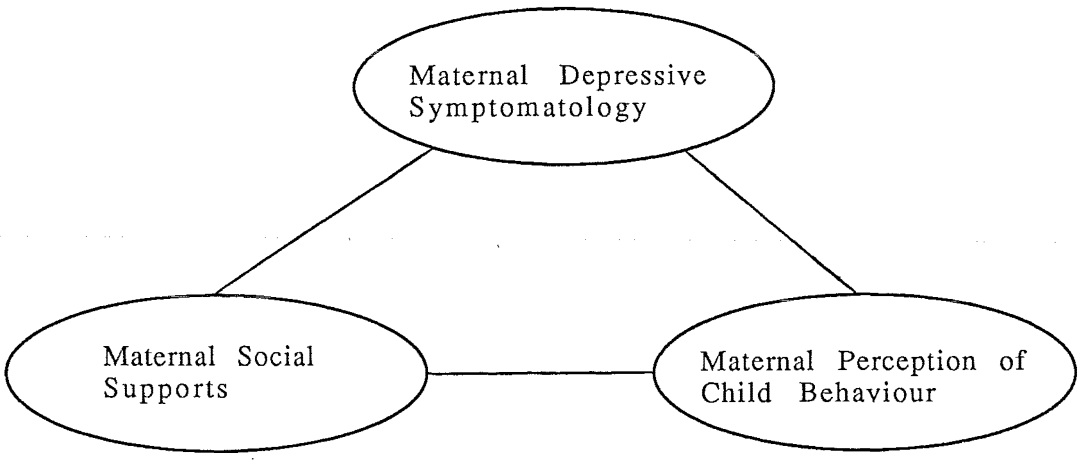
Hypotheses:

i) Maternal depressive symptomatology will increase with increases in maternal ratings of child behaviour problems.

ii) Maternal depressive symptomatology will increase with decreases in the availability and quality of maternal social support.

iii) Maternal ratings of child behaviour problems will increase with decreases in the availability and quality of maternal social support.

The hypothesized links between these three variables is illustrated in the model below.



3. To investigate the interrelationship between maternal depressive symptomatology, maternal social supports and maternal ratings of child behaviour problems in a community sample of women parenting alone.

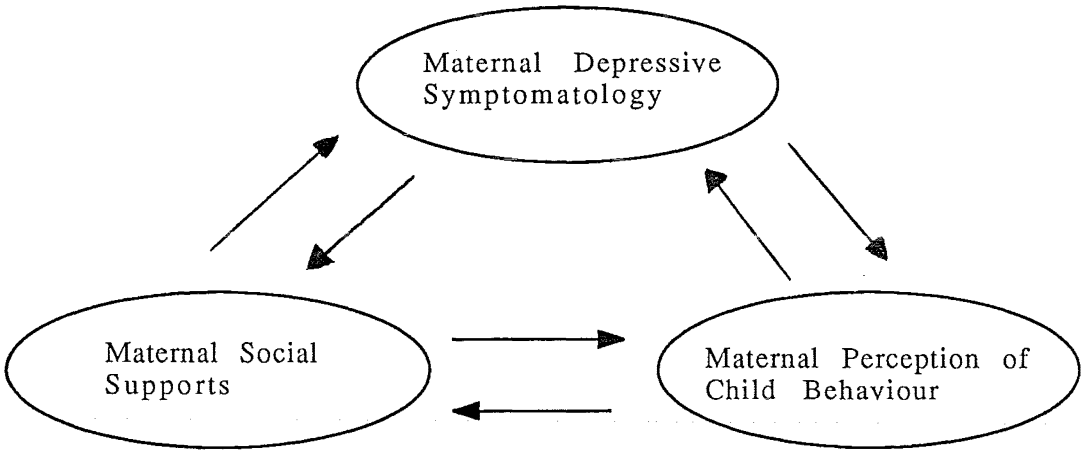
Hypotheses:

i) Maternal depressive symptomatology and maternal social support will have a reciprocal relationship with each other, independent of maternal ratings of child behaviour.

ii) Maternal depressive symptomatology and maternal ratings of child behaviour will have a reciprocal relationship with each other, independent of maternal social support.

iii) Maternal social support and maternal ratings of child behaviour will have a reciprocal relationship with each other, independent of maternal depressive symptomatology.

The hypothesized relationship between these three variables is represented in the model below.



Chapter Two

METHOD

SUBJECTS

Subject Characteristics

Subjects were 50 women parenting alone and 117 of their school-aged children. Each woman had at least two school-aged children to enable within-family comparison. The children were aged from 4 to 17 years, an age range to match the assessment procedure utilised which is only appropriate for children from 4 to 16 years of age (Achenbach & Edelbrock, 1983). Thirty-four women had two school-aged children, 16 had three school-aged children, and one woman had four school-aged children who were assessed. Four children of 17 years were included as their birthdays fell close to the interview date so they had only recently turned 17 years of age.

Subject Selection

Subject selection was nonrandom self-selection. The majority of women (N=30) responded to small articles printed in weekly newspapers delivered free to Christchurch households (see Appendix one). The articles briefly described what the study was about, why it was being undertaken, characteristics of subjects who were required and information on how to contact the researcher. Confidentiality of participants was assured. It was also mentioned that a small sum of money would be paid to participants. These women referred suitable friends (N=9). A further group of women (N=9) responded to a brief advertisement on a popular radio station. Advertisements were also posted in shop windows, doctors' surgeries, creches, family support

agencies and other relevant locations (see Appendix two), however, very few responses were received as a consequence of this advertising (N=2).

Initial advertising was carried out in an area of Christchurch that tends to be populated by lower and lower-middle income groups. It was thought that this feature would be associated with a high number of appropriate residents. As the response rate from initial advertising slowed down, advertising occurred more widely throughout Christchurch.

All the women lived in Christchurch, a city with approximately 300,000 residents. Half the women came from the area initially canvassed, the remaining women coming from a variety of areas in Christchurch.

QUESTIONNAIRES

General Information (see Appendix three)

Demographic

Basic demographic information was collected. This included the age of the respondent, her age at the birth of her first child, duration of her relationship with the father at the birth of the first child, ethnic and marital status, length of time living at present address, number of people in the household, and the number of children living with her who were her children.

Socio-economic Status

Female indices of socio-economic status, as with male indices, are based on occupational ranking. However, as the majority of women in the study considered their primary occupation to be homemaker, and/or mother this index was not appropriate. At present in New Zealand a satisfactory way to categorise women homemakers in terms of socio-economic class does not exist. Female homemakers have previously been

categorised according to their husband's occupation (Elley & Irving, 1978). However, as the present study is concerned with women not living with a husband or partner, such categorisation was not appropriate. For this reason information regarding women's income and education was obtained. These variables have been reported to strongly correlate with socio-economic indices and relevant dimensions of socio-economic status (Elley & Irving, 1972).

Stress and Life Events

To obtain a general picture of the level of stress in each woman's life, subjects were asked if they had experienced a range of stressful events over the past 12 months, and to rate each event on a Likert-type scale of 1 (not stressful) to 5 (very stressful) in regard to the amount of stress it caused them. Items covered a range of areas based on life events which are listed in the Social Readjustment Rating Scale (Holmes & Rahe, 1967) and included a family member suffering from a major illness, the death of someone close to them, loss of employment, a significant change in income, difficulties with authority, moving residence, the loss of a friendship, changes in their home environment, and any other events the repondent considered stressful.

Psychological History

Women were asked about psychological events that had occurred in their own history, or in the history of any person whom they considered had been in a significant relationship with their child(ren). Events specifically asked about included: substance abuse; depressive episodes; anxiety attacks; involvement in counselling, therapy or intervention programmes; and taking a course of relevant medication.

Father-Child Relationship

Women reported the frequency of each child's contact with their father in accordance with the following categories: daily; weekly; monthly; yearly; or no contact. Each woman also rated her perception of the quality of the father-child relationship on a Likert-type scale of 1 (good) to 5 (poor).

Other Information

Information concerning a number of other variables was also collected. This included length of time living as a single parent, involvement in a current intimate relationship and the social groups the women were members of. Membership was subjectively determined by each woman. It generally referred to sense of belonging with a number of other people that they had an organised meeting or contact with.

Crime Level

Local level of criminal activity was determined from Police statistics on the number of crimes reported within 150 square metres of each woman's residence. Low, medium and high levels of criminal activity were rated relative to the level of criminal activity reported in different areas of Christchurch from 1st of July 1989 to 30th of June 1990.

Depressive Symptomatology

To obtain levels of depressive symptomatology women completed the Beck Depression Inventory (BDI: Beck, Ward, Mendelson, Mock & Erbaugh, 1961). The BDI is a self-report inventory consisting of 21 items covering affective, cognitive, motivational and somatic symptoms. Items are rated on a scale of severity, and level of depression is obtained by

computing a total score. Items are able to be broken down into a cognitive-affective and somatic-performance subscales.

The BDI has reported split-half reliability scores ranging from .53 to .93, coefficient alphas for internal reliability from .79 to .91, and average item-total correlations of .68. The BDI has obtained consistently high correlations with other self-report and clinical ratings, and has shown acceptable criterion-related validity (Potts Carson, 1986). Furthermore, the BDI is one of the most frequently utilised measures of depressive symptomatology in related research, and thus was also selected to enhance comparability of results.

Psychiatric Symptomatology

The General Health Questionnaire-20 was administered to assess general psychiatric symptomatology (GHQ-20: Siegart, McCormick, Taylor & Walkey, 1987a). The GHQ-20 is a 20 item self-administered screening device for detecting nonpsychotic disorders in community populations developed from Goldberg's (1979) 30-item General Health Questionnaire. The 20 items cover four subscales: general illness, sleep disturbance, anxiety and dysphoria, and severe depression.

The GHQ-20 has obtained consistently high reliability, with split half reliability coefficients of .91, and Kuder-Richardson reliability scores of .90 for the test as a whole and .80 to .90 for each of the four subscales (Siegart et al., 1987a). While concurrent validity of the GHQ-20 has yet to be reported on, earlier investigations report total score correlations between the GHQ-30 and the Clinical Interview Schedule of .70, the GHQ-60 and Clinical Interview Schedule of .76, and the GHQ-60 and Present State Examination of .80 (Goldberg, 1978). Additionally, sensitivity and specificity levels of approximately 90% were reported. Goldberg (1978) has also argued that satisfactory construct validity is evidenced in the efficacy of the GHQ-60 in differentiating psychotic and

neurotic syndromes and content validity is ensured by the method of the test construction.

The GHQ-20 was utilised as it has a robust factor structure and takes less time to administer, thus it is more suitable when a number of questionnaires are being administered, and for a subject group that may have low motivation (Siegart et al., 1987a). In addition, the severe depression subscale provided another measure of depressive symptomatology.

Social Support

The Brief Social Support Questionnaire (BSSQ: Siegart, Patten & Walkey, 1987b) was administered to assess social support. The BSSQ is a 24 item questionnaire developed from the Social Support Questionnaire (Sarason, Levine, Basham & Sarason, 1983) and focuses mostly on emotional support. The questionnaire measures two aspects of support: perceived availability of social supports, and satisfaction with support that is available. As such, the BSSQ yields two scores: a network size score, obtained by averaging the number of supports listed over 12 items, and a satisfaction score, that is, the subject's mean level of satisfaction with the support available in the 12 situations described.

Reliability scores have been reported for two distinct groups: university students and unemployed persons (Siegart et al., 1987b). Coefficient alphas for network size of .93 and .94 for the respective samples, and .94 for satisfaction for both groups were obtained. For the student and unemployed samples, split-half reliability coefficients for network size of .94 and .96 and satisfaction of .93 and .92, item total correlations for network size of .76 and .79, and for satisfaction of .71 and .73 were also reported. Validity of the BSSQ is supported by the significant correlations it has obtained with the Inventory of Socially

Supportive Behaviours and the Stress scale of the General Health Questionnaire (Siegart et al., 1987b).

The BSSQ was selected as the abbreviated format helps maintain motivation when there is more than one questionnaire being administered (Siegart et al.,1987b). In addition, the BSSQ was developed in New Zealand thus has been found to be a reliable measure with a local population.

Insularity

The Community Interaction Checklist (CIC: Wahler, 1980b) was administered to assess insularity. The CIC assesses an individual's social interactions in the community. Subjects are required to recall extrafamilial interactions over the previous 24 hours. Interactions are coded to reflect the identity of the other party and valence of interaction. It is generally administered over a number of occasions and average scores obtained. The design of this study was not conducive to repeated administrations, therefore it was administered once.

Dumas (1986) has reported adequate reliability for the CIC with an intraclass correlation coefficient of .82 over five administrations of the checklist.

Maternal Ratings of Child Behaviour

The Child Behaviour Checklist (CBCL: Achenbach & Edelbrock, 1983) was utilised to assess women's perception of their children's behaviour. The CBCL assesses both social competence and behaviour problems and is appropriate for children aged between 4 and 16 years. Social competence is measured by items scored on three scales: activities, social, and school. Child behaviour is assessed by 118 items covering both externalising and internalising behaviour problems.

The CBCL has demonstrated adequate construct validity with correlations ranging from .71 to .92 with the Conners' Parent Questionnaire and Quay-Peterson Revised Behaviour Problem Checklist (Achenbach & Edelbrock, 1983). Also, for the behaviour and social competence scales, interparent agreement of .99 and .98, inter-interviewer reliability of .96 and .93 and test-retest reliability of .95 and .99 at one week, .83 and .98 at three months have been reported (Achenbach & Edelbrock, 1983).

The CBCL was selected as it is a comprehensive assessment procedure of child behaviour problems and is a frequently utilised measure in related research thus enhancing the comparability of results obtained in the present study.

Teacher Ratings of Child Behaviour

With the permission of the children's mothers, the teachers of those children who were attending school were requested to complete the 28 item version of the Conners' Teacher Rating Scale (CTRS: reprinted in Barkley, 1981). This scale is designed to measure the presence and severity of symptoms of childhood behavioural disorders. Although reliability or validity of the 28 item scale have not been reported, the 39 item CTRS has reported test-retest reliability of .71 to .91 on factor subscores of clinic referred children with behavioural disorders (Conners, 1969).

The CTRS is frequently used in conjunction with the Child Behaviour Checklist. The 28 item version was selected as its shortened format was hoped to increase the likelihood of teachers completing and returning the questionnaire.

PROCEDURE

Initial Response

Women all responded initially by telephone. The researcher gave them a brief synopsis of the study, interview procedure, and answered any questions. If the inquirer met the inclusion criteria and was still interested in participating a time was arranged for an interview.

The Interview

For the convenience and comfort of the women, all interviews were conducted in their own homes. In three instances, two women were interviewed together at their own request.

In all but one instance the researcher was present the entire time to answer any queries and to ensure women were completing the questionnaires correctly. On one occasion the questionnaires were left with a woman and picked up at a later date. This arrangement was made at her request.

Women were offered the choice of completing the questionnaires themselves or the researcher reading the questions and completing the questionnaire. There were 24 women who opted to complete the questionnaire themselves, while the remaining 26 preferred the researcher to complete the forms. In all instances the researcher completed the general information questionnaire.

After the completion of questionnaires the women were asked if they would allow a brief questionnaire to be sent to each of their child's school teacher. Mothers were able to view the material being sent to the teacher and, if agreeable, a consent form, to be included with the teacher's questionnaire, was signed. Respondents were agreeable in all instances and teacher surveys were forwarded for 112 of the 117 children. Two children had not started school, one child had left school and two children requested that the form not be sent. The teacher

surveys, a covering letter about the study and consent forms were given to the teacher by the women or posted (see Appendix four). Confidentiality of information was assured and a stamped return-addressed envelope provided for the return of the questionnaire.

The time taken for each interview ranged from 1 to 3 1/2 hours, most took approximately 2 hours. The length of the interview generally depended upon the amount of general conversation and explanation concerning the questionnaires required and whether or not children were at home.

Debriefing

After the completion of the interview women were thanked for their participation and told that they would be sent a brief report about the study when results had been written up. Each woman was given $10 for participating in the study.

Women who scored above clinical cut-off levels on the Beck Depression Inventory, and who were not currently involved in counselling, therapy, or an appropriate intervention programme, were revisited and their level of depressive symptomatology discussed. During this visit the researcher offered to write a letter, co-signed by her supervisor, to the woman's General Practitioner, outlining relevant findings and requesting appropriate assistance.

DATA ANALYSIS

The Statistical Package for Social Sciences was employed for data analysis. Pearson's correlation coefficients were employed to investigate the association between variables. Levels of significance were determined by a one-tailed t-test. Multiple regression analyses were used to examine the interrelationships among the variables. Because the current research was exploratory with no clear theory guiding the

nature of these interrelationships stepwise regression was the most suitable multiple regression procedure (Cohen & Cohen, 1983). In this procedure all potentially predictive variables are tested for their predictive power and the variable that makes the largest contribution to the explained variance in the to-be-predicted variable is selected. The relative contributions of the remaining variables are then tested and the variable making the largest additional contribution to the to-be-explained variance is entered. This process continues until all variables are entered into the equation, or until the additional contribution of any of the remaining variables fails to reach a specified level of significance. Preliminary correlational analysis was used to select variables to be entered in regression equations. The cut-off level for variables entering the equation was $p<.05$.

Two-way analyses of variance were used to investigate the main and interaction effects of child gender and age, and maternal depression level on maternal or teacher ratings of child behaviour.

Chapter Three

RESULTS

The results are presented in three sections. The first section deals with descriptive information about women parenting alone and includes demographic findings and scores on standardised assessment procedures. Means, and in some instances medians, ranges, frequencies, and percentage frequencies, will be presented. Where possible these results will be given a frame of reference by comparison with normative samples. The second section presents correlations between maternal depression, maternal social support and child behaviour variables. The third section deals with analyses which explored the interrelationship of these variables: stepwise multiple regression analyses and two-way analyses of variance.

DESCRIPTIVE INFORMATION

In most instances, actual numbers are reported. As the total number of women included in the study was 50 this makes transformation into a percentage a matter of doubling the actual number. Where appropriate percentages are reported, namely, for comparison with normative samples and with children (117 children were assessed, a figure not so easily converted to a percentage).

Women

Age

Women's ages ranged from 24 to 50 years. The median age of women was 35 years (mean also 35 years). This compares with the New Zealand median age for sole parents which is 39 years (Department of

Statistics, 1989). The age of women when they first gave birth ranged from 15 to 32 years, the median age being 22.5 years. The duration of the relationship with the father at the time of birth ranged from nil, some women stating they had not had a relationship with the father other than that of a brief sexual nature, to 10 years. The median length was 3 years.

Ethnic Status

Forty-eight women (96%) stated their race as Pakeha (European). There were two Maori women (4%). Thus the women's ethnic status is consistent with the 92% of Christchurch females in the 25-49 year old age group who are Pakeha, and 5% who are Maori (Department of Statistics, 1987a).

Marital Status

There were 24 women (48%) who were separated, 14 (28%) divorced, 7 (14%) never married and 4 (8%) widowed. One woman's husband was in care. However, although she was parenting on her own, she did not consider herself separated. Therefore, 43 (86%) had at some stage been married. These figures compare with the 1986 New Zealand demographic statistics which reported that less than 20% of women parenting alone in the 25-49 year old age group had never married and 75% were separated or divorced (Department of Statistics, 1989b).

Education

In regard to highest educational achievements 21 women (42%) had obtained no formal educational qualifications compared with 47% of 25-49 year old women in New Zealand with no qualifications (Department of Statistics, 1988a). There were 13 women (26%) who had achieved a School Certificate or University Entrance pass, and 4 (8%) had

some other nontertiary qualification. Four women (8%) had a tertiary qualification and 8 (16%) had obtained credits for University courses.

Income

All but one family had an income such that, based solely on income, they were placed in the lowest socio-economic group. This was a consequence of financial dependence upon Government Benefits. At the time of the study (1990) the Domestic Purposes (DPB) or Widows Benefit for a sole parent with two or more children was $11,901 per year[6] Additional family support for the first child was $1,892, and $832 for each additional child, resulting in the annual income for a woman parenting on her own with two children of $14,605, with $832 for each additional child (Department of Social Welfare, 1990).

Most women (N=47) were receiving a Domestic Purposes Benefit (DPB) or Widows Benefit. Three of these women were in full-time paid employment. However, as their income was below the benefit for their circumstances, this was supplemented by the DPB. Several woman had part-time employment. The maximum allowable income that can be earned in any one year is $3,000, any income greater than this results in a reduction in benefit. Therefore, additional income did not place families in a substantially higher income group. One woman was not receiving a benefit but in a private arrangement with her husband. However, the income she received was not, in effect, greater than her benefit entitlement. One woman's benefit had been stopped and she was dependent on donations for survival. Finally, one woman was receiving Accident Compensation which gave her an income somewhat greater than the DPB.

Thus, the income level of women in the present study is lower than the average annual wage of $28,526 for men and women living in

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[6] All income figures are gross.

Christchurch, and more specifically, lower than the average female annual wage in Christchurch which is $23,925 (Department of Statistics, 1990).

Residential Mobility

The length of time women had resided at their address ranged from less than 1 year to 26 years. There were 28 women (54%) who had lived at their present address for less than 4 years. Of this group 10 women (20%) had been there for less than 1 year. This compares with 1986 New Zealand demographic statistics which found that 49% of women in the 25-49 year old age group had lived at their address less than one year and 23% less than four years (Department of Statistics, 1988c). Additionally, 42% of New Zealanders had lived at their address for less than 4 years, and 19% for less than one year.

Household Composition

The number of people in each household ranged from three to nine. The median was four. This compares with the 1986 New Zealand average household size of 2.9 people, and the average size of one-family households of 3.2 people (Department of Statistics, 1988b). In addition to her children, one woman had her sister living with her and one woman lived with her mother. One woman shared a house with two other women parenting on their own and their children, giving a household total of nine people.

Number of Children Living with their Mother

The number of children living with their mother ranged from two to six. There were 45 women (90%) with two or three children living at home (20 with two and 25 with three). This compares with 1986 demographic statistics which found that 54% of all New Zealand

families had two or three children and that the average number of children in sole-parent families was 1.7 (Department of Statistics, 1989b).

Some women participating in the study had additional children who were not included in the study. Several children had left home to live independently, some were living with their father and in some instances children residing at home were either too young (<4 years) or too old (>16 years) to be included in the study.

Length of Time Parenting Alone

Many women stated they had had several periods in which they had parented on their own, intermittently broken by a 'live-in' relationship, including resuming previous relationships. The length of time women had been parenting alone in the present situation ranged from less than 1 year to 13 years. There were 26 women who had been parenting alone for 4 years or less. Alternatively 10 had been parenting alone for more than 8 years.

Intimate Relationship

There were 33 women who were not involved in a current intimate relationship compared with 17 who were involved in a current relationship. Of these 17, 10 had been in an intimate relationship for less than 1 year, 4 for 1-2 years , and 3 for 3-4 years.

Group Membership

Group membership ranged from zero to five affiliations. Half of the women did not belong to any organisations, clubs or groups, and 14 belonged to only one group. Membership included sports teams, including touch rugby, tennis and netball; single persons clubs; social service and helping groups, including the le Leache League; Parentline

and the PTA; and less formalised groups that had been established, such as the Bereaved Widows Support Group. One woman had helped establish regular group meetings with women in similar situations to give each other support and advice.

Crime Level

There were 14 women residing in areas of low criminal activity, 18 in areas of medium criminal activity, and 18 in areas of high criminal activity.

Psychiatric History

Findings indicated a high lifetime prevalence of psychological events for women and for people in their child(ren)'s social network. The number of woman reporting specific events is presented in Table 1.

Table 1. *Number of Women Reporting Psychological Events in Their Own and the Histories of Someone who was, or had been, in a Significant Relationship with their Child(ren).*

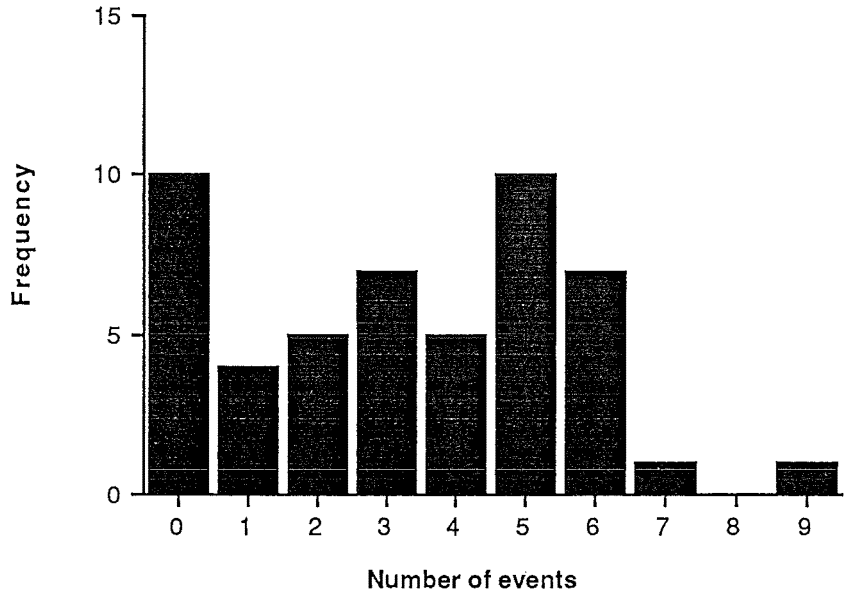
PSYCHOLOGICAL EVENTS	Women	Significant Others
Substance abuse	5	22
Depressive episode	24	15
Anxiety attacks	20	12
Counselling or therapy	33	24
Intervention programme	22	13
Relevant medication	24	11
Other event	12	6
Current therapy or intervention programme	14	9[a]

[a]Number of families with children currently in therapy, counselling, or an intervention programme.

As can be seen from Table 1 the most frequent psychological event in the history of women was counselling or therapy with two-thirds of women listing its occurrence. About half of the women reported a history of depressive episodes, anxiety attacks, participation in intervention programmes, and had received relevant medication (mostly anti-depressants, sleeping tablets or antabuse). Less frequently reported were current involvement in counselling or therapy, and other psychological events in their history. Other events which were reported included hypertension, asthma and a suicide attempt. Finally, despite the high use of antabuse very few women reported a history of substance abuse.

The number of psychological events reported by each woman was calculated. The frequency distribution of the number of psychological events reported in each woman's history is illustrated in Figure 1. This distribution indicates that the number of events reported in women's histories were fairly evenly distributed with the highest frequencies reported for zero events (N=10) and five events (N=10).

Figure 1. *Frequency Distribution of the Total Number of Psychological Events Reported in Women's Histories.*

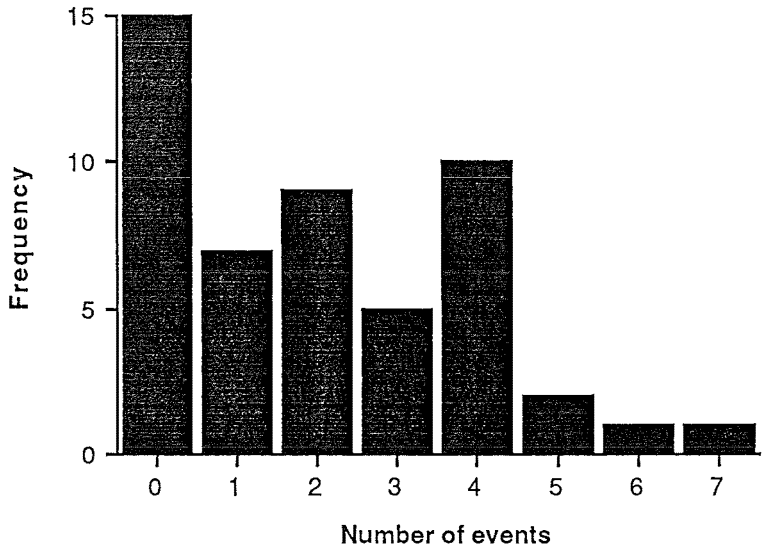


Women were asked about the history of psychological events in any other person they considered was, or had been, in a significant relationship with their child(ren). These results are also presented in Table 1. Almost half the women stated their child(ren) had been, or were in, a close relationship with a substance abuser. The person mentioned was generally male, most often the child's father. A similar number listed someone who had been involved in counselling or therapy. Women less frequently listed someone who had suffered from depressive episodes or anxiety attacks, been involved in an intervention programme, received relevant medication, or had any other relevant other events occur. Other events which were reported included sexual abuse, hypertension and a stroke. Only a few women stated any of their children were currently involved in therapy, counselling or an intervention programme.

The total number of psychological events reported by each woman in the history of someone who had been in a significant relationship with their child(ren) was calculated and are presented in

Figure 2. As can be seen from this distribution a sizeable proportion of women listed between one and four events, although the largest single group of women listed no events.

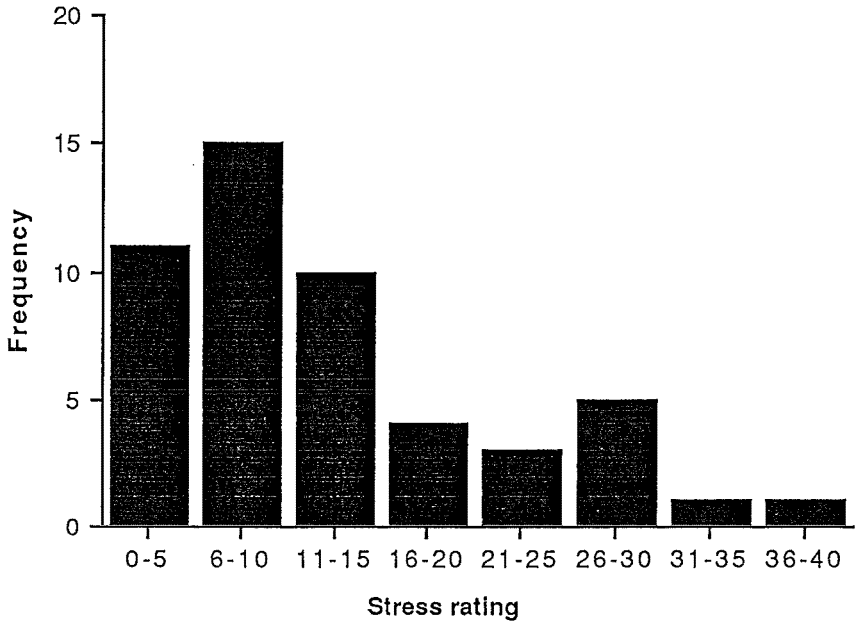
Figure 2. *Frequency Distribution of the Number of Psychological Events Reported by Women in the Histories of Someone who was, or had been, in a Significant Relationship with their Child(ren).*



Stress

The number of stressful life events experienced in the past 12 months ranged from zero to nine, with a mean of four. Out of a maximum possible score of 45, women's total stress ratings ranged from 0 to 37. [The number of stressful events and total stress ratings were strongly correlated ($r=.90$, $p<.0001$)]. A frequency distribution of women's stress ratings is presented in Figure 3. The negative skew of this distribution indicates that although there was a large range of stress experienced most women tended to reported lower levels of stress.

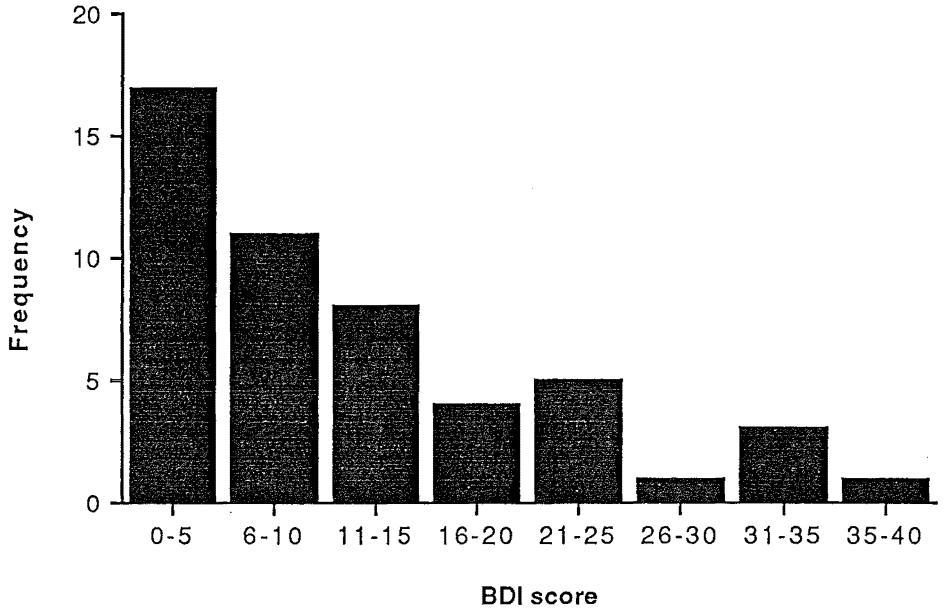
Figure 3. *Frequency Distribution of Women's Stress Ratings.*



Depressive Symptomatology

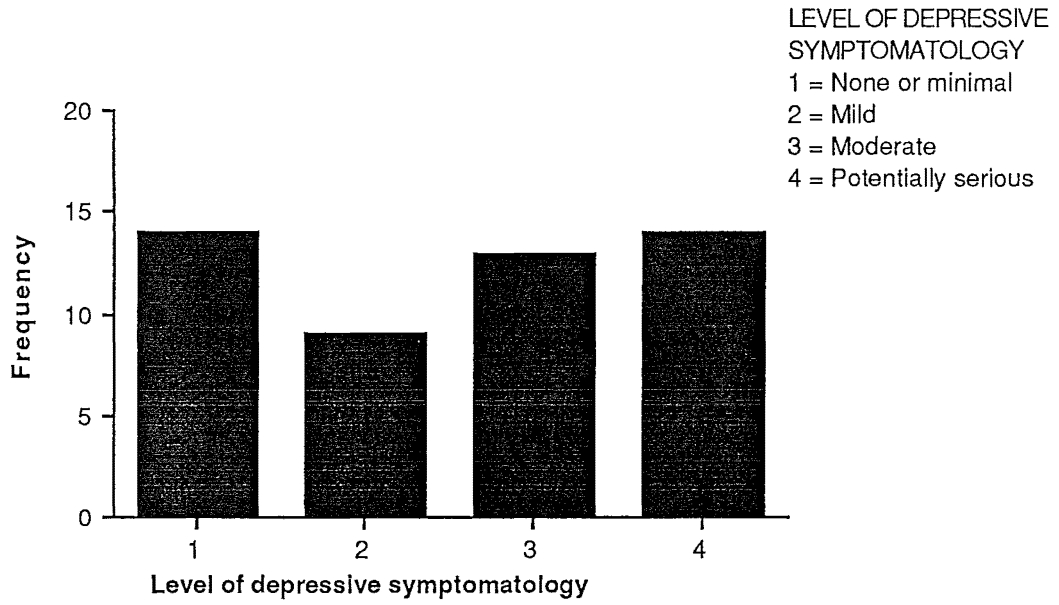
Scores on the Beck Depression Inventory (Beck et al., 1969) ranged from 0 to 37, the mean score 11.62, median, 8. For the different subscales, scores ranged from 0 to 23 on the cognitive-affective, and 0 to 19 on the somatic-performance subscale, with a mean of 6.52 and 5.10 respectively (the median for both subscales was 5). The frequency distribution of BDI scores is presented in Figure 4.

Figure 4. *Frequency Distribution of Women's BDI Scores.*



Although it appears most women scored low on the BDI, when considering the clinical cut off score is 16, a considerable proportion of women reported clinically significant levels of depressive symptomatology. Based on BDI estimated levels of depressive symptomatology 14 women suffered from potentially serious levels of depressive symptomatology and 13 moderate levels. There were 9 women who suffered from mild levels, and the remaining 14 minimal or no depressive symptoms. Figure 5 presents the frequency of women with each level of depressive symptomatology. This distribution illustrates the fairly even number of women at each of the four levels.

Figure 5. *Frequency Distribution of Women's BDI Levels of Depressive Symptomatology.*



Mean total and subscale scores, and total score standard deviations on the BDI are able to be compared with those of normative outpatient samples (Beck & Steer, 1987). These comparisons are presented in Table 2. In all instances mean scores of depressed symptoms obtained by women were lower than outpatient groups.

Table 2. *Total and Subscale Mean Scores and Total Score Standard Deviations on the BDI for the Present Study and Outpatient Normative Samples.*

SAMPLE	Total Score $\overline{X}$	Total Score SD	C-A[a] $\overline{X}$	S-P[b] $\overline{X}$
Present study	11.62	9.95	6.52	5.10
Heroin addicted	13.17	9.35	7.51	5.66
Alcoholic	13.88	10.60	9.16	7.37
Dysthymic disorder	17.48	7.15	12.15	5.33
Mixed diagnostic	23.19	9.90	15.55	7.63
Major depressive disorder Single episode	23.35	7.83	15.57	7.79
Major depressive disorder Recurrent episode	23.56	9.24	15.82	7.74

[a]cognitive-affective subscale, [b]somatic-performance subscale.

Another measure of depressive symptomatology was the severe depression subscale of the GHQ-20. Scores on this scale ranged from 0 to 10, median score 1.5. There were 21 women who scored zero on this scale and 37 scoring two or less. Thus, this scale did not reflect the range of depressive symptomatology the BDI obtained.

Psychiatric Symptomatology

Scores on the GHQ-20 ranged from 0 to 53, with a median of 16. Frequency distribution of women's scores on the GHQ-20 are presented in Figure 6. As with the BDI women's GHQ-20 scores were negatively skewed. However, as clinical cut-off levels for the GHQ-60 are low in regard to the range of possible scores[7], it is likely that a number of women had levels of psychiatric symptoms which were of concern.

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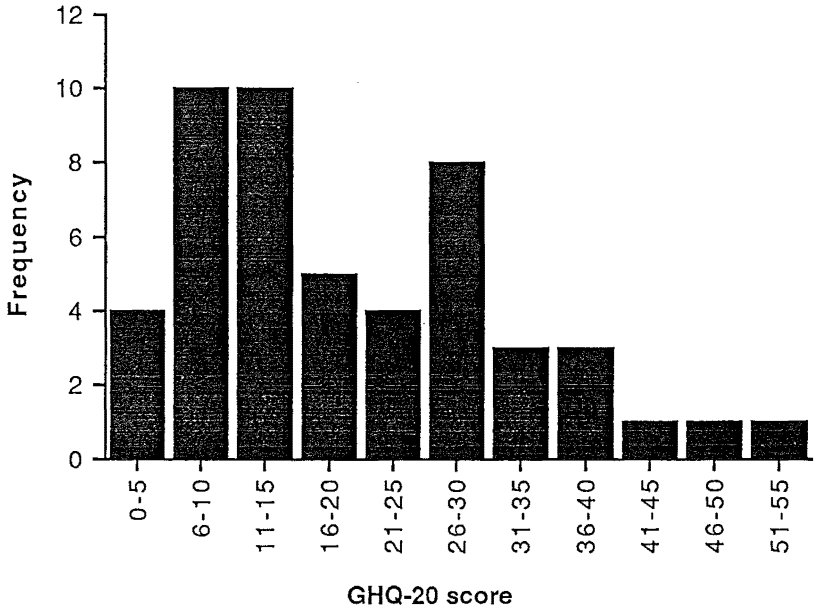
[7] Clinical cut off levels for the GHQ-20 were not available.

Figure 6. *Frequency Distribution of Women's GHQ-20 Scores.*



For the general, sleep disturbance, and anxiety and dysphoria subscales scores ranged from 0 to 15. Median scores were 4, 5 and 5 respectively. As previously mentioned, scores on the severe depression subscale ranged from 0 to 10, with a median of 1.5. Thus, women more frequently reported nonpsychotic psychiatric symptoms distinct from symptoms of severe depression.

Social Support

The Brief Social Support Questionnaire obtained two scores for social supports, firstly a network size score, maximum possible = eight, and secondly, satisfaction with supports, highest level of satisfaction = one. Women's network size scores ranged from zero to five. The median score was three, with 42 women obtaining a score of four or less, and 24 two or less. Women's satisfaction scores ranged from one to five, the median being one. There were 43 women who scored one or two, and 47 one, two or three. Thus, while the size of women's social networks was quite small, the level of satisfaction women report with their supports

tended to be high. Frequency distribution of women's network size and satisfaction with their support network are presented in Figures 7 and 8. These figures illustrate that there was a reasonable variance within the range of scores for network size but little variance for satisfaction with supports as most women were very satisfied with their support network.

Figure 7. *Frequency Distribution of Women's Network Size Scores on the BSSQ.*

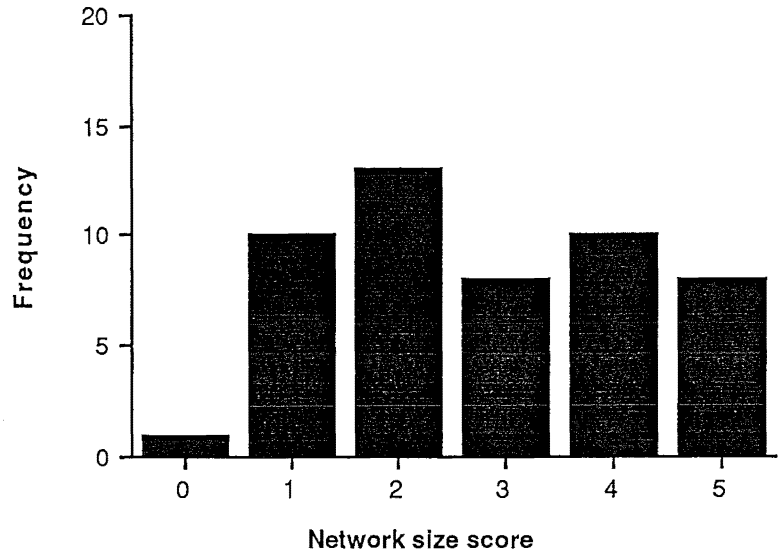
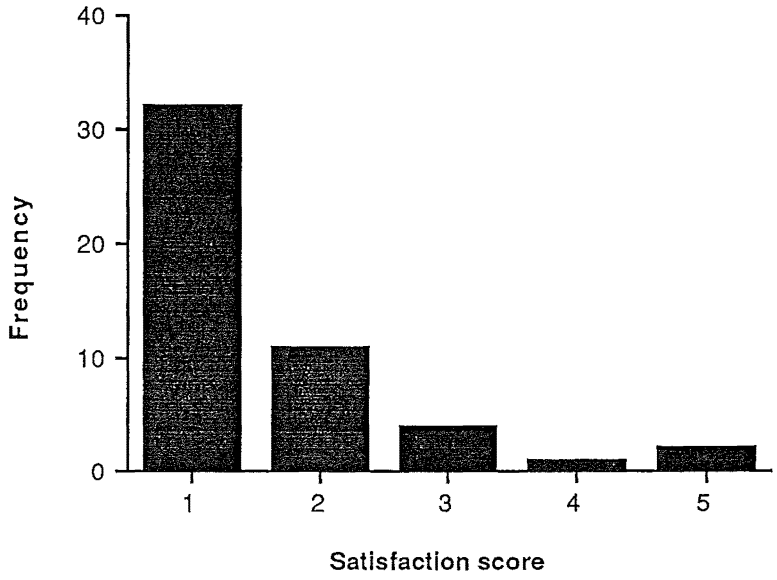


Figure 8. *Frequency Distribution of Women's Satisfaction Scores on the BSSQ.*



Women's mean scores on the BSSQ can be compared to mean scores obtained by New Zealand unemployed and student groups (Siegart et al., 1987b). Table 3 compares these three groups. Although women had a mean network size slightly larger than unemployed individuals, and slightly smaller than students, they were much more satisfied with the support they received from people in their social network.

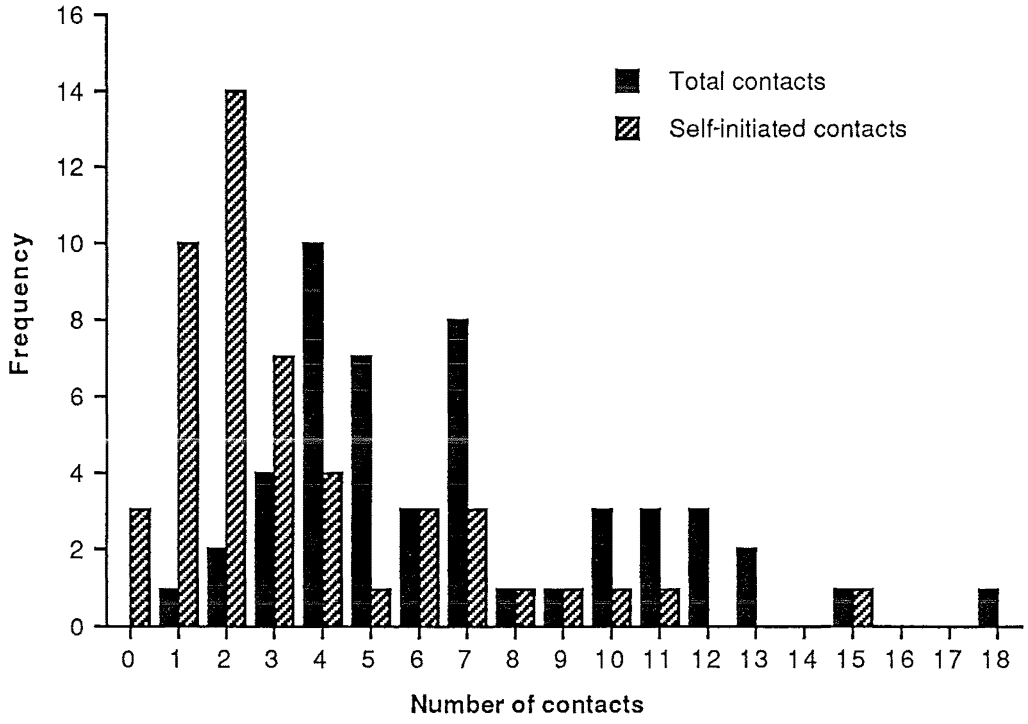
Table 3. *Mean Network Size and Satisfaction Scores obtained on the BSSQ in the Present Study and by Unemployed and Student Groups.*

SAMPLE	Network Size	Satisfaction
Present study	2.80	1.60
Unemployed	2.17	5.08
Students	3.42	5.08

Insularity

The total number of contacts women reported having during the previous 24 hours ranged from 1 to 18, the median was 6. There were 24 women who had had five or fewer contacts. The number of self-initiated contacts ranged from 0 to 15 with the median being two. The frequency distribution of total and self-initiated contacts are compared in Figure 9. Although the range of total and self-initiated contacts is similar, the number of total contacts has a normal distribution, whereas the distribution of the number of self-initiated contacts is negatively skewed. Thus, for the most part women did not initiate contacts.

Figure 9. *Frequency Distribution of Women's Number of Total and Self-initiated Contacts on the CIC.*



The mean and median percentage of women's different types of contacts and mean valence for each type of contact are presented in Table 4. Almost half the contacts were with friends and almost a third with acquaintances. Comparatively few contacts were with kin,

strangers or helping agency representatives. Women tended to rate contacts as positive, and higher than valence for the day (i.e., the lower the rating the more positive the contact). Most positive contacts were with friends, followed by kin. Least positive contacts were with helping agencies, followed by acquaintances.

Table 4. *The Mean and Median Percentage of Women's Different Types of Contacts and their Mean Valence of Contacts and Valence of Day.*

	Mean% of contacts	Median % of contacts	Valence
Kin	15	8	2.0
Friends	45	43	1.6
Acquaintances	28	28	2.5
Strangers	7	0	2.2
Helping agency representative	4	0	2.7
Total contacts			1.9[a]
Day			2.4

[a]Mean valence.

Children

Age

Children's ages ranged from 4 to 17 years. The first child's age ranged from 6 to 17 years (median age = 12 years), the second child from 4 to 15 years (median age = 8 years), and the third child from 4 to 14 years (median age = 6 years). Only one family had a fourth child interviewed who was 7 years of age. For analyses of variance, children were categorised into in three age groups, 4-8 years, 9-12 years and 13-17 years. The percentage of children in each age group is shown in Table 5. As can be seen from this table most first children were in the 9-12

year old age group whereas most second and third children were in the 4-8 year old age group.

Table 5. *Percentage of Children in 4-8 year old, 9-12 year old and 13-17 year old age groups.*

	AGE		
	4-8 years	9-12 years	13-17 years
First child	10 (5)	54 (27)	36 (18)
Second child	54 (27)	28 (14)	18 (9)
Third child	69 (11)	25 (4)	6 (1)
All children	38 (44)[a]	39 (45)	24 (28)

Note. The numbers of children in each group appear in brackets.
[a]Includes the fourth child.

Ethnic Status

There was a greater number of ethnic identities for children compared with women although, as with women, the majority of children were Pakeha (European). Of first children 78% were Pakeha, 16% Maori, and 6% other ethnic identities including one Phillipino, one Lebanese and one African. With second children 80% were Pakeha, 12% Maori, and 8% other ethnic identities, including one African, one Black American, one Lebanese, and one Indian. There were 81% of third children who were Pakeha, and 19% who were Maori. The fourth child was Pakeha.

The proportion of first, second and third children who are Pakeha is slightly higher than the 73% of 5 to 17 year old New Zealand children who are Pakeha. For first and second children the proportion of Maori children is lower than the 19% of New Zealanders aged from 5 to 17 years old who are Maori whereas third children are appropriately representative (Department of Statistics, 1987b). However, the proportion of first and second children who are Pakeha or Maori is

consistent with the proportion of Pakeha and Maori children in the Christchurch region (Department of Statistics, 1987a).

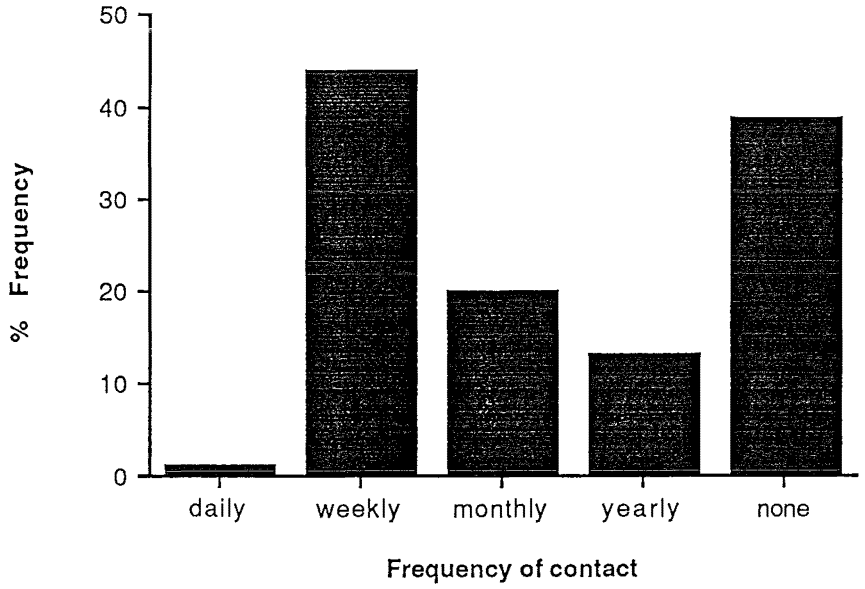
Gender

Of the 117 children included in the study 52% were female and 48% male. More first children were male, 60%, compared with only 40% female. The reverse was true for the second child with 66% female and 34% male. It was almost equal for third children with 56% male and 44% female. The fourth child was female.

Children's Contact with their Father

The frequency of contact with fathers ranged from daily to no contact at all. Most children had weekly contact (38%) or no contact (33%). Seventeen percent had monthly contact with their father, and 11% had yearly. Only one child (.85%) saw his father on a daily basis. The percentage frequency distribution of children's frequency of contact with their father is presented in Figure 10.

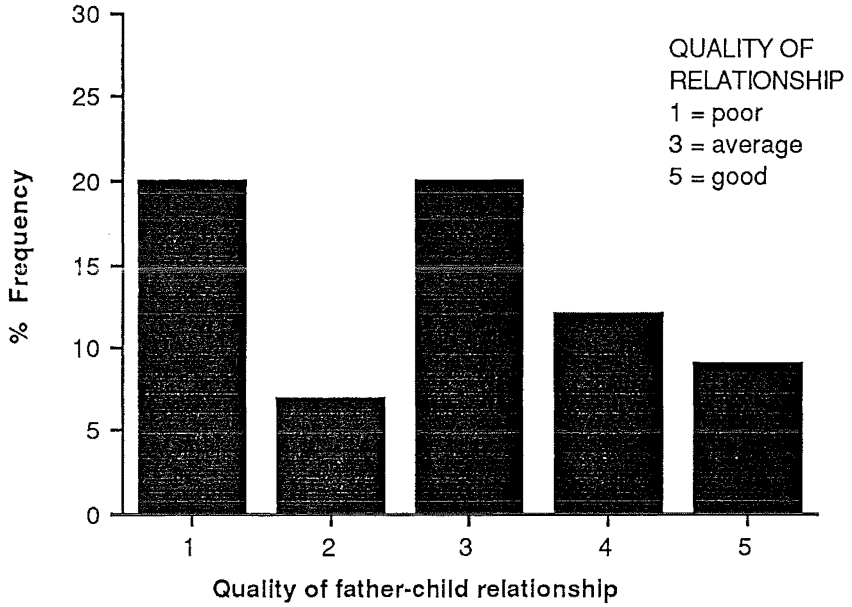
Figure 10. *Percentage Frequency Distribution of Children's Frequency of Contact with their Father.*



Mother's Perception of the Father-Child Relationship.

Women's perception of the the quality of the father-child relationship was not obtained for one-third of the children as they no longer had contact with their father (although some ratings were given based on the relationship before contact had ceased, in some instance this had been quite recent). For the remaining two-thirds of the children, women's perception of the father-child relationship ranged from 1 (good) to 5 (poor). A percentage frequency distribution of these ratings is presented in Figure 11. Overall, a similar number of women considered their children to have a good relationship with their father as the number who considered the father-child relationship was average or worse than average.

Figure 11. *Percentage Frequency Distribution of Mothers' Perceptions of the Quality of the Father-Child Relationship.*



Maternal Ratings of Child Behaviour and Social Competence

The Child Behaviour Checklist yielded scores in two areas, firstly social competence, which is the sum of activities score, social score and school score (low scores are congruent with a lower level of social competence) and secondly a behaviour score (high scores are congruent with a greater amount of behaviour problems). Mean and median scores obtained on the CBCL are presented in Table 6.

Table 6. *Mean and Median Scores obtained by First, Second and Third Children on the CBCL.*

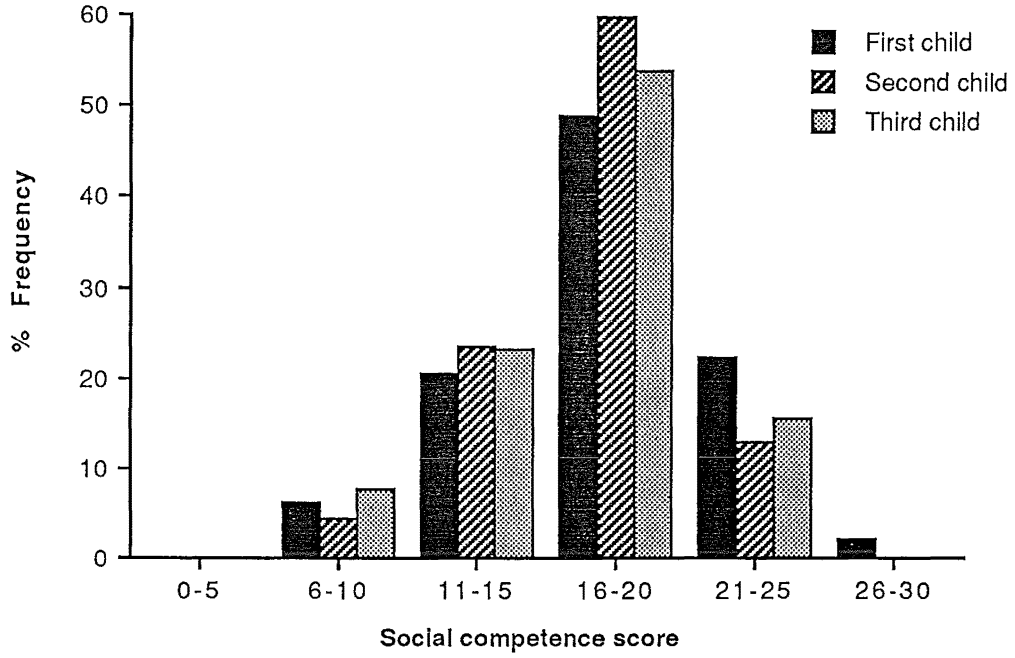
	SUBSCALE				
CHILD	Activities	Social	School	Social Competence	Behaviour
First	6.80 (7)	5.98 (6)	4.59 (5)	17.94 (19)	32.26 (31)
Second	6.50 (7)	5.80 (6)	4.42 (5)	17.30 (18)	30.64 (26)
Third	5.92 (6)	5.00 (5.5)	4.92 (5)	17.03 (17)	31.19 (25)

Note. Median scores appear in brackets beside mean scores.

Social Competence

As seen in the Table 6 mean social competence scores obtained by first, second and third children were very similar. For the first child social competence scores ranged from 9 to 26 (SD 3.93) for the second child from 8 to 24 (SD 3.46), and for the third child from 9 to 25 (SD 4.19). The percentage frequency distribution presented in Figure 12 illustrates the similarity of scores. This distribution follows a normal distribution pattern.

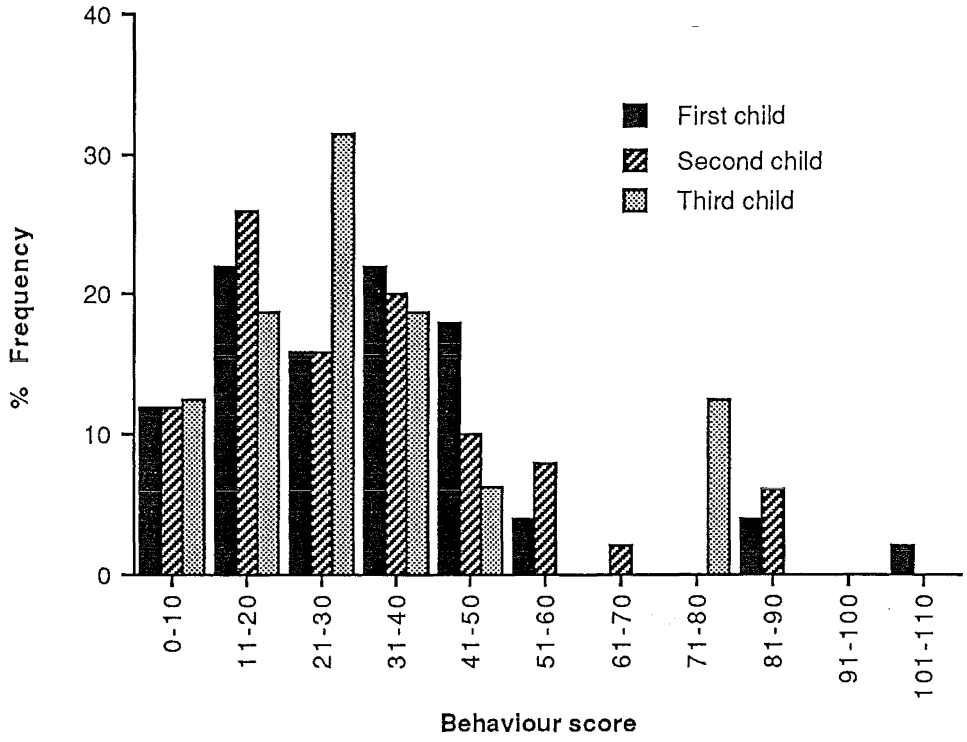
Figure 12. *Percentage Frequency Distribution of CBCL Social Competence Scores for First, Second and Third Children.*



Behaviour

CBCL behaviour scores for the first child ranged from 5 to 107, (SD 21.0), for the second child from 2 to 88 (SD 20.7) and for the third child from 7 to 70 (SD 20.8). Although the range of behaviour scores was greater for the first child, means were not substantially different between the first, second or third child. The higher median score for first children is reflective of the larger range. To illustrate the distribution of scores percentage frequency distributions are presented in Figure 13. The distribution of scores is negatively skewed suggesting that although some children were perceived as having a large number of behavioural problems, children for the most part received ratings of behaviour problems in the lower half of this range.

Figure 13. *Percentage Frequency Distribution of CBCL Behaviour Scores for First, Second, and Third Children.*



Mean social competence and behaviour scores can be compared with norms according to age and sex (Archenbach & Edelbrock, 1983). These comparisons are presented in Table 7 for girls and in Table 8 for boys[8].

[8] In the present study social competence scores for the 4-5 year old girls may be somewhat elevated because normative samples did not include the school score.

Table 7. *Girls' Mean CBCL Scores obtained in the Present Study, and by Clinical and Nonclinical Normative Samples.*

	AGE								
	4-5 years			6-11 years			12-16 years		
Girls' Score	A	B	C	A	B	C	A	B	C
FIRST	N=3			N=8			N=9		
Beh	30.7	58.8	25.5	26.9	58.4	19.9	24.2	55.8	16.6
SC	18.2	10.2	13.6	19.6	15.2	20.4	20.3	15.4	20.8
SECOND	N=4			N=24			N=5		
Beh	31.5	58.8	25.5	30.0	58.4	19.9	56.2	55.8	16.6
SC	19.0	10.2	13.6	17.8	15.2	20.4	15.4	15.4	20.8
THIRD	N=3			N=3			N=1		
Beh	20.0	58.8	25.2	46.7	58.4	19.9	7.0	55.8	16.6
SC	14.0	10.2	13.6	17.1	15.2	20.4	17.2	15.4	20.8
ALL	N=10			N=35			N=15		
Beh	27.4	58.8	25.2	34.5	58.4	19.9	29.1	55.8	16.6
SC	17.1	10.2	13.6	18.2	15.2	20.4	17.6	15.4	20.8

Note 1. A = Present study, B = Clinical sample, C = Nonclinical sample.

Note 2. Beh = Behaviour subscale, SC = Social competence subscale.

Note 3. Norms have been obtained from United States samples; clinical norms from children evaluated at child guidance clinics and nonclinical norms from interviews with parents in randomly selected families (Achenbach & Edelbrock, 1983).

Table 8. *Boys' Mean CBCL Scores obtained in the Present Study, and by Clinical and Nonclinical Normative Samples.*

	AGE								
	4-5 years			6-11 years			12-16 years		
Boys' Score	A	B	C	A	B	C	A	B	C
FIRST	N=1			N=15			N=14		
Beh	20.0	59.8	24.1	40.6	58.9	21.7	32.8	53.1	17.5
SC	12.3	9.1	12.9	19.0	15.0	20.1	16.4	14.8	20.6
SECOND	N=0			N=13			N=4		
Beh		59.8	24.1	24.4	58.9	21.7	22.3	53.1	17.5
SC		9.1	12.9	18.7	15.0	20.1	16.3	14.8	20.6
THIRD	N=4			N=4			N=4		
Beh	38.0	59.8	24.1	27.0	58.9	21.7	32.0	53.1	17.5
SC	14.8	9.1	12.9	20.9	15.0	20.1	15.9	14.8	20.1
ALL	N=5			N=32			N=56		
Beh	39.0	59.8	24.1	30.7	58.9	21.7	23.7	53.1	17.5
SC	13.6	9.1	12.9	19.5	15.0	20.1	16.2	14.8	20.7

Note 1. A = Present study, B = Clinical sample, C = Nonclinical sample.

Note 2. Beh = Behaviour subscale, SC = Social competence subscale.

Note 3. Norms have been obtained from US samples; clinical norms from children evaluated at child guidance clinics and nonclinical norms from interviews with parents in randomly selected families (Achenbach & Edelbrock, 1983).

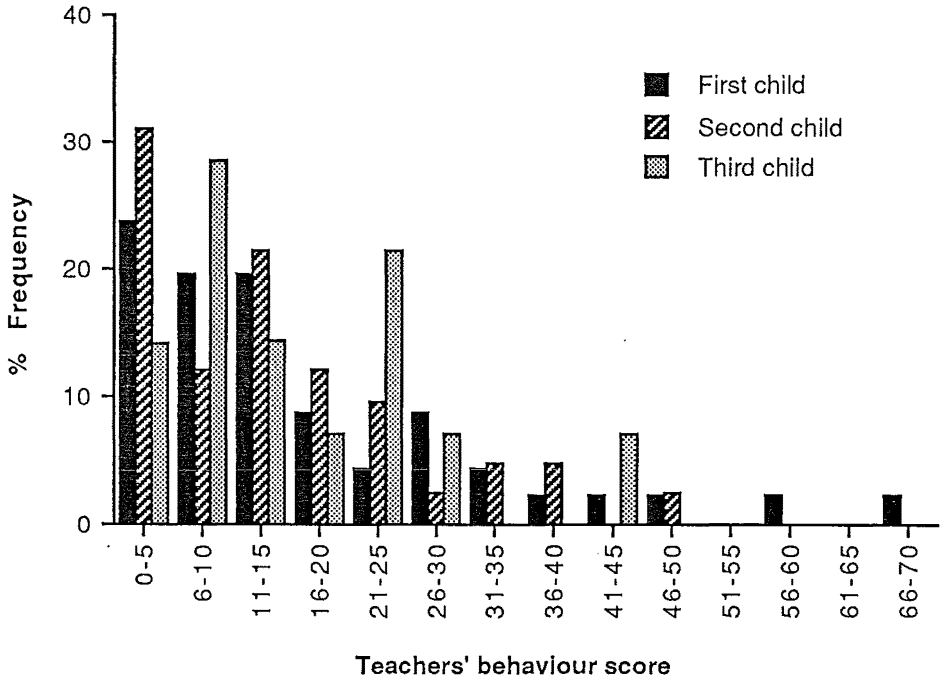
Scores in the present study tended to be higher than scores obtained by the nonclinical sample but not as high as scores obtained by the clinical sample. The only exception being second girls aged 12 to 16 years who scored higher than the clinical normative sample on the behaviour scale and the same as the clinical sample on the social

competence scale. Although some scores are very close to the clinical norms, as the number in each group is often less than 10 it is more appropriate to limit comparisons to the combined groups of first, second and third children in each age group. For the combined groups there was a trend for women to rate lower levels of social competence and more behaviour problems in their children compared with the nonclinical normative sample. In particular, social competence was lower and closer to the clinical normative sample for girls and boys in the 12-16 year old group. Behaviour scores tended to be substantially higher than the nonclinical norms for girls in the 6-11 and 12-16 year age groups and boys in the 4-5 and 6-11 year age groups. Thus, women have rated 6-11 years olds as having high levels of problem behaviour regardless of sex, but only 4-5 year old boys and 12-16 year old girls were so rated.

Teacher Ratings of Child Behaviour

The Conners' Teacher Rating Scale was sent to 112 teachers, with a 92% return rate. The mean score for first, second and third children did not greatly differ from each other. For the first child scores ranged from 0 to 71, the mean 17.93 (median = 12), for the second child from 0 to 50, the mean 15.34 (median = 14), and for the third 2 to 44, the mean 16.79 (median = 13). Percentage frequency distributions of the CTRS scores for first, second and third children are presented in Figure 14. The negative skew of these distributions indicates that although there was a large range of scores children tended to be rated by teachers as having lower levels of problem behaviour within this range.

Figure 14. *Percentage Frequency Distribution of CTRS Scores for First, Second, and Third Children.*



CORRELATIONS

This section presents the coefficients of correlation obtained between the major variables under investigation, that is, maternal depressive symptomatology, maternal social supports, and child behaviour problems (stress ratings are included in the social support variable group). The aspects of these variables measured are shown in Table 9.

Table 9. *Aspects of the Major Variables included in the Correlational Analysis.*

MAJOR VARIABLE	VARIABLES INCLUDED
Maternal Depression	BDI: depressive symptomatology GHQ-20-severe depression scale
Social Support	BSSQ: network size BSSQ: satisfaction with social supports CIC: number of total contacts CIC: number of self-initiated contacts CIC: mean valence of contacts CIC: valence of day Stress Rating
Child Behaviour	Maternal ratings on the CBCL: Behaviour Maternal ratings on the CBCL: Social competence Teacher ratings of behaviour: CTRS

Results in this section will be presented in two parts. Firstly, coefficients of correlation between the different aspects measured in each major variable group; and secondly, coefficients of correlation across the three variable groups.

Within-Group Correlations Between Different Aspects of Each Major Variable

Correlations between different aspects of the same major variable can act as validity checks. In some instances the two separate measures were taken for that purpose, in others to support measures of less investigated and/or frequently disputed concepts, or because there was no single measure that would adequately represent the major variable.

Major Variable Group One: Depressive Symptomatology

Women's scores on the BDI were positively correlated with the GHQ-20 and the GHQ-20 severe depression subscale. However, the GHQ-20-severe depression subscale did not correlate as highly with the BDI as the total GHQ-20 score. Correlations between BDI, GHQ-20, and the severe depression scale of the GHQ-20 are presented in Table 10.

Table 10. *Correlations between BDI, GHQ-20 and GHQ-20-severe depression subscale Scores.*

MEASURES	2	3
1. BDI	.72*	.55*
2. GHQ-20	--	.70*
3. GHQ-20-severe depression subscale		--

* p<.001

Major Variable Group Two: Social Supports

A number of variables measured different aspects of social support and insularity. Correlations between these variables are presented in Table 11.

Table 11. *Correlations Between BSSQ Scores, CIC Scores and Stress Ratings.*

MEASURES	2	3	4	5	6	7
BSSQ						
1. Network size	-.59***	.23***	.22**	-.21**	-.44***	-.01
2. Satisfaction	--	-.08	-.15*	.06	.30***	-.04
CIC						
3. No. of contacts		--	.76***	.18**	-.15*	.06
4. Self-initiated contacts			--	.08	-.14	-.07
5. Mean valence of contacts				--	.41***	-.08
6. Valence of day					--	.03
7. Stress Ratings						--

* p< .05, ** p<.01, *** p<.001

Network size and satisfaction scores were strongly correlated. The size of women's social networks increased along with increases in her satisfaction with support. Network size was strongly negatively correlated with valence of day, and moderately negatively correlated with mean valence of contacts, indicating that the larger a woman's network the more positively she rated her day and contacts. Satisfaction scores were moderately correlated with valence of day, and weakly, but significantly correlated with the number of self-initiated contacts. The more satisfied women were with their supports the more positively they rated their day and, to a lesser degree, the less likely they were to initiate contacts.

The number of self-initiated contacts increased with the number of total contacts. Small, but significant correlations were obtained between total number of contacts and mean valence of contacts and

valence of day. There was a slight tendency for the quality of the women's days to improve with an increase in the number of their contacts. Mean valence of contacts was strongly positively correlated with valence of day

Women's stress rating did not yield results indicating that there was a close relationship between the amount of stress women had experienced over the previous 12 months and the measures of social support that were assessed.

Major Variable Group Three: Maternal and Teacher Ratings of Child Behaviour

Maternal and teacher ratings of child behaviour were strongly positively correlated. Maternal ratings of child social competence were weakly negatively correlated with maternal and teacher ratings of child behaviour. There was a slight tendency for women's and teachers ratings of child behaviour problems to increase as women's ratings of their children's social competence decreased. Correlations between CBCL behaviour and social competence scores, and scores on the CTRS, are presented in Table 12.

Table 12. *Correlations Between CBCL and CTRS Scores.*

MEASURES	2	3
Maternal Ratings		
1. CBCL: Behaviour	-.21*	.47***
2. CBCL: Social competence	--	-.22**
Teacher Ratings		
3. CTRS		--

* p< .05, ** p<.01, *** p<.001

Correlations Between the Main Variables

Maternal Depressive Symptomatology and Child Behaviour

Correlations between maternal and teacher ratings of child behaviour problems and maternal ratings of child social competence with women's depressive symptomatology are presented in Table 13. Correlations with maternal general psychiatric symptomatology are also presented.

Table 13. *Correlations between BDI and GHQ-20 Scores with CBCL and CTRS Scores.*

	SYMPTOMATOLOGY	
CHILD BEHAVIOUR	BDI	GHQ-20
Maternal Ratings		
CBCL: Behaviour	.52***	.32***
CBCL: Social competence	-.09	-.25**
Teacher Ratings		
CTRS	.18*	.12

* p<.05, ** p< .01, *** p< .001

Both maternal and teacher ratings of child behaviour were positively correlated with the BDI, this correlation being strongest for maternal ratings. The higher a woman's level of depressive symptomatology, the higher the number of child behaviour problems reported by the mother and, to a lesser degree, the teacher. Maternal ratings of child behaviour were significantly correlated with the GHQ-20, whereas teacher ratings were not. Maternal ratings of children's social competence were more strongly correlated with the GHQ-20 compared with the BDI. Thus, women with higher levels of general psychiatric

symptomatology reported more child behaviour problems and rated their children as being less socially competent.

Maternal Depressive Symptomatology and Social Supports

Correlations between BDI scores with BSSQ, CIC and stress ratings are presented in Table 14. Correlations with the GHQ-20, are also presented.

Table 14. *Correlations between BDI and GHQ-20 Scores with BSSQ and CIC Scores and Stress Ratings.*

	SYMPTOMATOLOGY	
SOCIAL SUPPORT	BDI	GHQ-20
BSSQ		
Network size	-.45***	-.36***
Satisfaction	.20*	.19*
CIC		
Number of contacts	-.04	-.07
Self-initiated contacts	-.09	-.06
Mean valence of contacts	.28***	.17*
Valence of day	.44***	.35***
Stress Ratings	.44***	.38***

* p< .05, ** p< .01, *** p< .001

The BDI was strongly correlated with network size and stress ratings. The smaller the size of a woman's network, or the greater the amount of stress experienced in the last 12 months the higher her level of depressive symptomatology. Similar correlations were reported with the GHQ-20. Satisfaction scores were weakly but significantly correlated

with BDI and GHQ-20 scores. In regard to maternal insularity, the BDI was strongly correlated with valence of day and mean valence of contacts. Thus, the more negatively women rated both their day and their contacts, the higher their depressive symptomatology. The number of total and self-initiated contacts were not significantly correlated with the BDI or GHQ-20.

Maternal Social Supports and Child Behaviour

Correlations between BSSQ and CIC scores and stress ratings with CBCL and CTRS scores are presented in Table 15.

Table 15. *Correlations between BSSQ and CIC Scores and Stress Ratings with CBCL and CTRS Scores.*

	CHILD BEHAVIOUR		
	Maternal Ratings		Teacher Ratings
SOCIAL SUPPORT	CBCL: Behaviour	CBCL: Social competence	CTRS
BSSQ			
Network size	-.23**	.30***	-.21*
Satisfaction	.19*	-.22**	.17*
CIC			
Number of contacts	.02	.15	-.14
Self-initiated contacts	-.02	.15*	-.27
Mean valence of contacts	.18*	-.11	-.08
Valence of day	.30***	.05	-.17
Stress Ratings	.30***	.02	.14

* p< .05, ** p< .01,*** p< .001

Women's network size was significantly correlated with all three child measures. The strongest correlation was with maternal ratings of children's social competence. Network size was weakly, but significantly correlated with maternal ratings of child behaviour problems and teachers' ratings of behaviour. These results indicate that the smaller a woman's support network the more child behaviour problems both the woman and teacher were likely to report, and the less socially competent women considered their children to be.

Women's satisfaction with their support network was also correlated with all three child measures. The strongest correlation was with maternal ratings of child social competence followed by weaker, but significant, correlations with maternal ratings of behaviour and teacher ratings. The pattern of correlations was similar to those with network size. The less satisfied women were with their support network, the less socially competent they considered their children and the larger the number of child behaviour problems reported by both the mother and the teacher.

Maternal ratings of child behaviour were moderately correlated with mother's valence of day and were weakly, but significantly, correlated with mean valence of contacts. The more negatively a women rated her day and contacts the larger the number of behaviour problems she perceived her children to have. Maternal ratings of child social competence were weakly correlated with valence of day and self-initiated contacts. The number of self-initiated contacts was weakly, but significantly correlated with maternal ratings of child social competence. The more negatively a woman rated her day and the smaller her number of self-initiated contacts the less socially competent she considered her children.

Women's stress ratings also increased with increases in maternal perception of child behaviour problems. Women who had experienced

higher levels of stress during the last 12 months considered their children to have more behaviour problems compared with women experiencing lower levels of stress. This covariance was statistically significant. Maternal stress rating was not significantly correlated with teacher ratings of child behaviour problems or maternal ratings of social competence.

STEPWISE MULTIPLE REGRESSION AND ANALYSIS OF VARIANCE

Stepwise Multiple Regression

Correlational analysis revealed a number of significant relationships between many of the variables under investigation. Stepwise multiple regression analysis was employed to determine which variable, or group of variables, was most predictive of the values of each main variable, and to determine the relative contribution of each of these predictor variables. Variables entered into the regression equations were selected on the basis of correlation coefficients (i.e., they were variables which had a significant correlation with the to-be-predicted variable). The most predictive models found for each of the variables are presented below.

Predictors of Maternal Depressive Symptomatology

Social support and child measures were significantly correlated with women's BDI scores. Multiple regression determined if different variables had an effect in their own right. The most predictive model of women's BDI scores is presented in Table 16. Child behaviour (mother-rated) accounted for 27% of the variance in women's BDI scores. Network size accounted for an additional 11% and stress ratings a further 10%. The combined model accounted for 48% of the variance. Although significantly correlated with women's BDI scores, teachers'

ratings of child behaviour, satisfaction with support network, valence of contacts, and valence of day all failed to enter the equation, and did not account for a significant independent proportion of the variance.

Table 16. *Stepwise Multiple Regression Analysis of BDI.*

Variables entering the equation in sequence	R^2	R^2 change	Beta	B	p
1. CBCL: Behaviour	.27		.33	.15	.001
2. Network size	.38	.11	-.36	-2.5	.001
3. Stress ratings	.48	.10	.34	.37	.001

Predictors of Maternal Social Support

Stepwise multiple regression analysis was performed on a number of social support variables. Table 17 presents findings from the first of these regression analyses, predicting network size from satisfaction with supports, depressive symptomatology, and number of contacts. The combined model of satisfaction with social supports, BDI score and number of contacts accounted for 50% of the variance in women's network size scores. The satisfaction score, the other aspect of social support assessed in the BSSQ, accounted for the largest proportion of variance, 34%. BDI scores accounted for an additional 11% and number of contacts a further 5%. Thus, even though two of the variables entering the model are related aspects of social support, depressive symptomatology still independently accounted for a significant proportion of variance. Maternal ratings of child social competence and teacher ratings of child behaviour were significantly correlated with network size but failed to enter the equation.

Table 17. *Stepwise Multiple Regression Analysis of Network Size.*

Variables entering the equation in sequence	R^2	R^2 change	Beta	B	p
1. Satisfaction	.34		-.50	-.66	.001
2. BDI	.45	.11	-.34	-.05	.001
3. Number of contacts	.50	.05	.20	.08	.003

Table 18 presents the results of multiple regression analysis of predictors of satisfaction with supports. Network size was the only variable that accounted for a significant proportion of variance (34%) of women's satisfaction scores on the BSSQ. All three child measures and women's BDI score were significantly correlated with satisfaction scores but failed to enter the equation.

Table 18. *Stepwise Multiple Regression Analysis of Satisfaction with Supports.*

Variables entering the equation	R^2	R^2 change	Beta	B	p
Network size	.34		.59	-.44	.001

Stepwise multiple regression was performed using insularity measures[9]. Predictors of the number of contacts (Table 19) and of the number of self-initiated contacts (Table 20) were the number of self-initiated contacts and the total number of contacts, each accounting for exactly the same proportion of each others' variance (58%). This is not surprising considering how highly they were correlated ($r=.76$, $p< .001$). While a small but significant correlation was obtained between maternal ratings of social competence and number of self-initiated contacts this

[9] Because of the narrow range of scores possible for the valence of day and mean valence of contacts (1-5) these variables were not included in regression analysis.

variable failed to enter the regression equation for self-initiated contacts.

Table 19. *Stepwise Multiple Regression Analysis of Total Number of Contacts.*

Variables entering the equation	R^2	R^2 change	Beta	B	p
Self-initiated contacts	.58		.76	.93	.001

Table 20. *Stepwise Multiple Regression Analysis of Number of Self-initiated Contacts.*

Variables entering the equation	R^2	R^2 change	Beta	B	p
Number of contacts	.58		.76	.93	.001

Predictors of Maternal Stress

The BDI and network size accounted for 24% of the variance in women's stress ratings (Table 21). The BDI accounted for the largest proportion of variance in maternal stress ratings (19%). Network size accounted for an additional 5%. Maternal ratings of child behaviour which were significantly correlated with women's stress ratings failed to enter the equation, thus did not account for a significant proportion of the variance.

Table 21. *Stepwise Multiple Regression Analysis of Stress Ratings.*

Variables entering the equation in sequence	R^2	R^2 change	Beta	B	p
1. BDI	.19		.54	.50	.001
2. Network size	.24	.05	.23	1.48	.01

Predictors of Child Behaviour and Social Competence

Stepwise multiple regression analysis was performed on the child behaviour measures. Table 22 presents the results of analysis of maternal ratings of child behaviour. The BDI was the only variable that accounted for a significant proportion of variance in maternal ratings of behaviour (27%). Although a number of social support measures were significantly correlated with maternal ratings of child behaviour (i.e., network size, satisfaction with supports, mean valence of contacts, and stress ratings) no other variables accounted for a significant independent proportion of the variance.

Table 22. *Stepwise Multiple Regression Analysis of CBCL Behaviour.*

Variables entering the equation	R^2	R^2 change	Beta	B	p
BDI	.27		.52	1.09	.001

Stepwise multiple regression analysis of maternal ratings of child social competence is presented in Table 23. Network size was the only variable to account for a significant proportion of variance (5%). A number of social support measures were significantly correlated with maternal ratings of child social competence (i.e., satisfaction with supports, self-initiated contacts and valence of day) but no other variable entered the equation.

Table 23. *Stepwise Multiple Regression Analysis of CBCL Social Competence.*

Variables entering the equation	R^2	R^2 change	Beta	B	p
Network size	.05		.25	.88	.02

Predictors of Teachers' Ratings of Child Behaviour

Lastly, the results of a stepwise multiple regression analysis of teacher ratings of child behaviour is shown in Table 24. The CBCL Behaviour score (i.e., maternal ratings) accounted for 22% of the variance. Although the BDI, network size and satisfaction scores were significantly correlated with the CTRS they failed to enter the stepwise equation, and as a result, no other variable accounted for a significant independent proportion of variance.

Table 24. *Stepwise Multiple Regression Analysis of CTRS.*

Variables entering the equation	R^2	R^2 change	Beta	B	p
CBCL: Behaviour	.22		.47	.30	.001

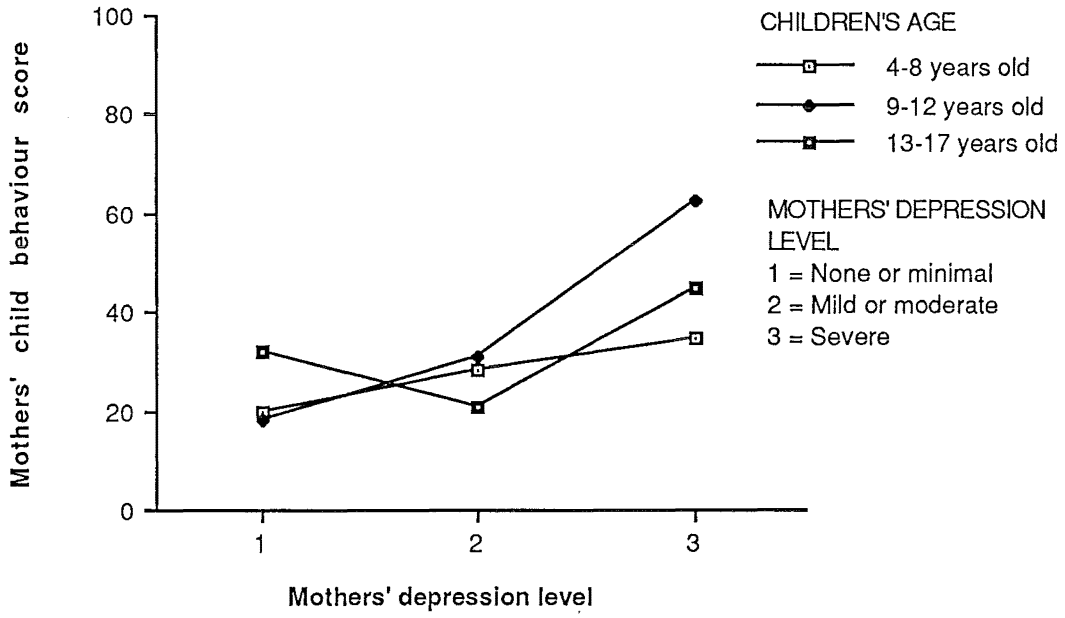
Two-Way Analysis of Variance

Two-way analyses of variance were performed on the following dependent variables: Maternal ratings of child behaviour; Teacher ratings of child behaviour; and Maternal ratings of social competence. These analyses compared either child age and gender, or child age and mothers' level of depression. In these analyses, the children's ages were grouped into three categories: 4-8, 9-12, and 13-17 year-olds, and mothers' depression levels were grouped as minimal symptoms (or no symptoms), mild to moderate symptoms and severe symptoms, based on the mother's BDI score.

Mothers who were depressed rated their children's behaviour as worse than those who were not ($F[2,108] = 18.47$, $p<.001$). The age of the children did not systematically alter the mother's behaviour ratings, but age did interact with depression ($F[4,108] = 3.63$, $p<.01$) as shown in Figure 15. The behaviour of the youngest children and the oldest children grew only slightly worse as their mothers' depression

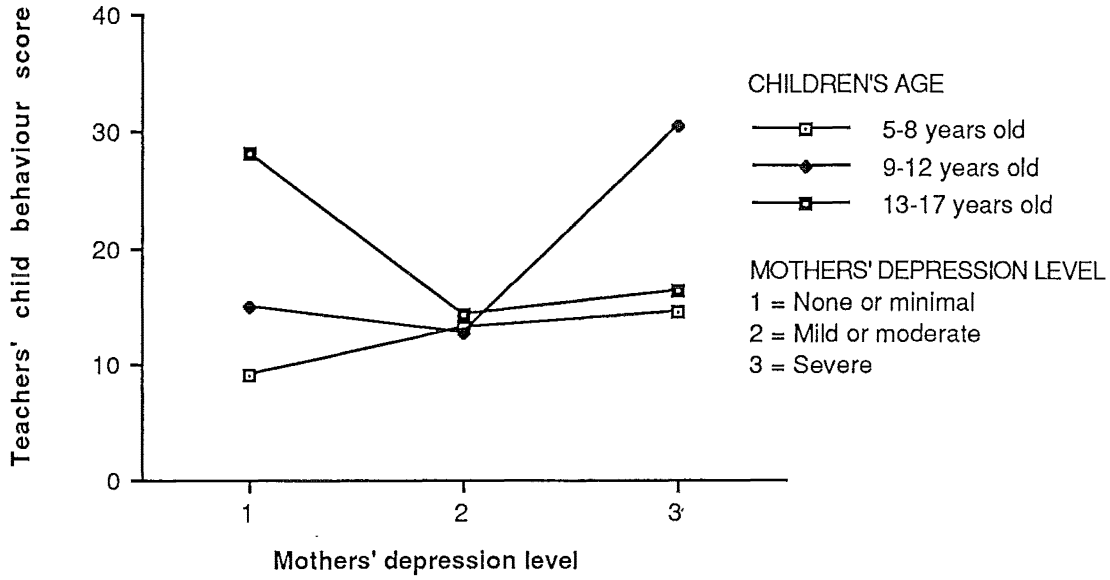
worsened, but there was a trend for 9-12 year-olds' behaviour to become much worse as their mothers' depression level increased.

Figure 15. *The Interaction Effect between Maternal Level of Depression and Child Age on Maternal Ratings of Child Behaviour.*



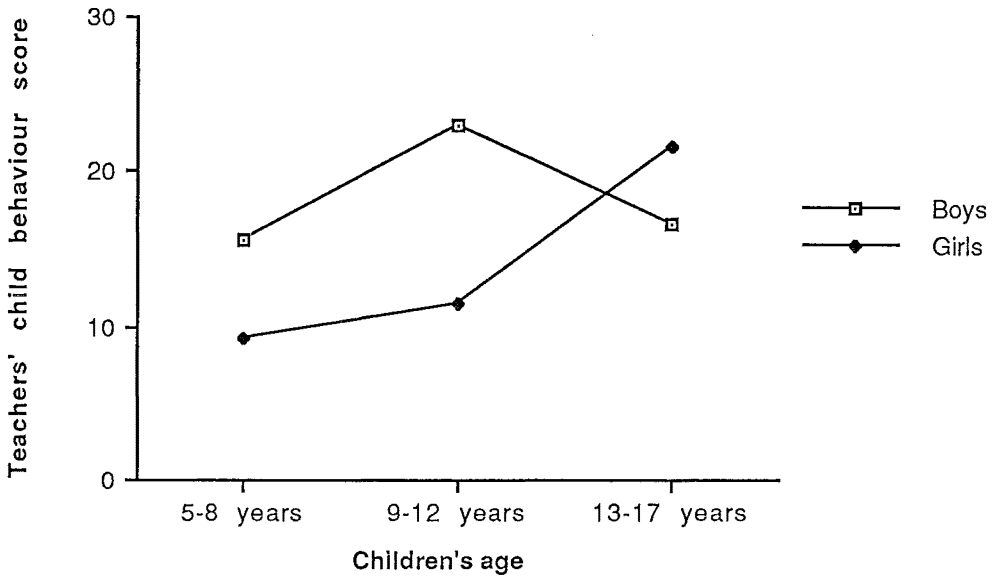
Teachers' ratings of child behaviour also grew worse as a function of their mothers' depression level ($F[2,94] = 3.45$, $p<.05$) and, as Figure 16 shows, there was an interaction effect with child age ($F[4,94] = 3.46$, $p<.01$). In some respects this pattern is consistent with maternal ratings, in that depression had the least impact on the youngest children, and the behaviour of 9-12 year-olds was worst for those children whose mothers were most depressed. However, 13-17 year-olds showed the opposite pattern. The worst behaved in this group, as rated by their teachers, had the least depressed mothers.

Figure 16. *The Interaction Effect between Maternal Level of Depression and Child Age on Teachers' Ratings of Child Behaviour.*



Mothers' ratings of child behaviour did not differ as a function of child age and gender, but teachers rated girls, overall, as better behaved than boys ($F[1,97] = 5.7$, $p<.05$), except that adolescent girls were rated as slightly less well-behaved than adolescent boys (Figure 17), accounting for the significant interaction between gender and age ($F[2,97] = 3.02$, $p<.05$). In this sample at least, teachers perceived boys' behaviour problems as peaking between ages 9-12, while girls behaviour problems increased markedly in adolescence.

Figure 17. *The Interaction Effect between Children's Age and Gender on Teachers' Ratings of Child Behaviour.*



Analyses of maternal ratings of child behaviour as a function of child age and gender, and analyses of children's social competence did not reveal any significant differences.

Chapter Four

DISCUSSION

The main purpose of this study was to examine the interrelationships between maternal depressive symptomatology, maternal social supports, and child behaviour problems. In doing so, two minor aims were incorporated. Firstly, this research was conducted with women who were parenting alone. This focus enabled the collection of information about a specific group in New Zealand society which research has largely neglected. Secondly, the inclusion of at least two children enabled the investigation of the effect of sibling order on maternal and teachers' perception of child behaviour.

Discussion of the results of this study will be organised as follows: firstly, descriptive information about women parenting alone is discussed. The effects of sibling order will be included in this section. This is followed by a discussion of findings concerning the relationships between the main variables under study. Results pertaining to the hypothesis being tested are central to this section of the discussion, although other results are also commented on. Lastly, the effect of child age and gender are considered.

CHARACTERISTICS OF WOMEN WHO ARE PARENTING ALONE

Comparison with New Zealand Demographic Statistics

To understand how applicable findings are to New Zealand women parenting alone the representativeness of the present sample of women parenting alone may be illustrated by comparison with New Zealand demographic statistics.

The average age of women in the present study is slightly younger than the average age of New Zealand women who are parenting on their own (Department of Statistics, 1989). This is somewhat surprising considering the present study required women to have two children of school age. If anything, it would be expected that the exclusion of women with only preschool children would have resulted in women being older than the average age of New Zealand women parenting on their own. It may be that the exclusion of women who had only one school age child and/or children older than 16 years overcompensated for this potential bias. A small proportion of women parenting alone are younger or older than any of the women selected. This finding is to be expected in light of the selection criteria which excluded women with only one school age child and/or children younger than 4 years or older than 16 years.

The proportion of Pakeha and Maori women in the present study is consistent with the proportion of Pakeha and Maori women living in the Christchurch (Department of Statistics, 1987a). However, compared with New Zealand as a whole, Christchurch has a lower proportion of Maori or Pacific Islanders. As a result, the women in the present study are not representative of the higher proportion of women in other ethnic groups who are resident in New Zealand.

The number of women who were separated, divorced, widowed or never married is fairly consistent with the marital status of New Zealand sole parents. The majority of women have previously been married. This finding is in line with New Zealand demographic statistics (Department of Statistics, 1989b) and with the marital status of women in Ritchie's (1980) study on 'solo' mothers in Hamilton.

Women's low income is consistent with New Zealand demographic statistics which report sole-parent families have an income less than $20,000, and that this income is only 41% of that of a two-parent family

(Department of Statistics, 1989b). Women in the current study survive on little more than half of the New Zealand average annual wage and not quite two-thirds of New Zealand female average annual wage (Department of Statistics, 1990). The low level of women's income is further highlighted by comparison with Davidson's (1987) Christchurch study of families with aggressive children. Although income figures in Davidson's study were obtained at least 4 years earlier, the average family income was $19,800 compared with $14,605 in the present study for a mother and two children, maximum allowable extra of $3000. Even before accounting for inflation over the intervening 4 year period, these figures illustrate the substantially lower income for families in the present study.

The women's income is a result of most of them being financially dependent on a Government Benefit which is set at level to enable *basic* needs to be met rather than allowing for a comfortable standard of living. Even if women are in full time employment the income they earn is insufficient to cover living costs. Therefore, they are still reliant on Government Benefits for survival and, as a consequence, subject to the same personal restrictions placed on Domestic Purpose and Widowed beneficiaries (e.g., investigations are often conducted regarding the nature of beneficiaries intimate relationships. Benefits are terminated if a relationship is ruled to be a de facto marriage). In addition, several women in paid employment state that once the associated cost of transport, clothing and child care is taken into account they are worse off financially.

Households in the present study are large when compared with the average New Zealand one-family household (Department of Statistics, 1988b). They also have more children living in them compared with the average number of children in New Zealand families and New Zealand sole-parent families (Department of Statistics, 1989b).

The larger size of the women's households and the greater number of children living with them is most likely a result of selection criteria which required women to have at least two school-aged children.

In summary, women in the present study are representative of New Zealand sole-parent families headed by women in terms of marital status and income, and representative of Christchurch women in this age group in regard to ethnic status. However, women in the present study are slightly younger than the average New Zealand sole-parent, have a greater number of people living in their households and on average there are a larger number of children living with their mother compared with the average New Zealand sole-parent family. These differences are most likely the result of subject selection criteria.

Social Characteristics: Additional Information

The educational qualifications of women parenting alone compare favourably with New Zealand women in this age group (Department of Statistics, 1988a) and with Christchurch mothers in a recent study concerned with aggressive families (Davidson, 1987). The greater proportion of women in the present study with an educational qualification may be a consequence of women only being entitled to remain on the DPB or Widows Benefit until their children reach a certain age or remain at home. They therefore are faced with an insecure financial position in the future. This may incite women to gain educational qualifications so as to place themselves in a more favourable position for a return to the paid workforce. In contrast, women who share parenting do not have the same incentive to further their educational qualifications as they are unlikely to lose income support from their partner because their children are of a certain age or are no longer at home. Also, unless they are in a similarly low income group, women living with a partner are often required to pay higher costs for

further studies as they are not eligible for subsidies or reduced fees which may act as a disincentive for these women to continue their formal education.

An alternative explanation for the high level of educational qualifications is that, as subjects were self-selected, a disproportionate number of qualified women may have participated in the study thereby inflating the level of educational qualifications.

In the present study women parenting alone were no more mobile than New Zealand women of this age, or New Zealanders in general (Department of Statistics, 1988c). This contrasts with Fergusson, Horwood and Shannon's (1981a) findings that single parents had a higher rate of residential mobility compared with dual-parent families. One reason for the discrepancy with may be that in Fergusson et al.'s study the women all had children 3 years of age. It is possible that marital status is associated with higher residential mobility only for sole-parent families with women or children of certain age groups (i.e., families with younger women or children). Another reason may be that Fergusson et al. included women with only one child. These families may be more mobile as it is probably easier to move residence with only one child compared with two or more children.

Women in the present study have a narrower range of living arrangements compared with women in Ritchie's (1980) study of 'solo mothers'. Ritchie reported more women living with parents, other solo parents, and other nonrelated adults compared with women in the current research. However, as Ritchie did not require women to have at least two children some may have had only one child. It is probably easier to combine households with one child, compared with households with two or more children. Additionally, more women had never married in Ritchie's study, thus may have never moved from their parents' home in the first instance.

Most women parenting on their own do not belong to any organisations, and if they do, only one. The low level of group membership is consistent with an earlier Christchurch study of women parenting on their own (SROW, 1975). This study found that two-thirds of women felt restricted in their ability to take part in activities outside the home. The main reasons given for these feelings of restriction were lack of time, money and energy. Similar reasons for lack of group membership were cited by women in the present study. Firstly, women were on a very low income. Most activities cost money for transportation, fees, subscriptions or equipment. Women frequently state they find it difficult to financially support children's extracurricular activities which they consider a priority for available money over their own interests. Secondly, women are required not only to look after their children's needs but the running of the household financially, socially and domestically. Generally, women do not have the opportunity to share these tasks with a partner which would free-up time and energy to pursue other interests. Thirdly, if women do want to have time off it is often necessary to arrange child care as they do not have a partner to fulfill this role. This arrangement is often at a financial cost to women.

Most women are not involved in an intimate relationship. Lack of group membership and/or lack of involvement in an intimate relationship may be associated with the experience of loneliness which is reported to be common amongst women parenting alone (Ritchie, 1980; SROW, 1975).

The large number of women reporting psychological events in their histories is consistent with other New Zealand research. Ritchie (1980) found that three-quarters of solo parents reported emotional problems. Similarly, a Christchurch study of women parenting on their

own found that 51% of women had been treated for mental, psychological or emotional disorders (SROW, 1975).

More women had participated in counselling or therapy than had received relevant medication and about the same number had been involved in an intervention programme as had received relevant medication. This compares with earlier Christchurch research on women parenting alone which reported that the most frequent treatment for mental, psychological or emotional disorders was tranquillizers (SROW, 1975). The contrast in treatment utilization between these two studies may be due to the fact that the present study was carried out some fifteen years after SROW's study. In this time there has been an increase in the availability of other forms of treatment for psychological problems and a parallel increase in acceptance for these treatment alternatives. For instance, three-quarters of the women were separated or divorced and were therefore likely to have been offered counselling and/or treatment intervention programmes in conjunction with obtaining a legal separation.

The large number of women who reported their own or a significant others' participation in counselling, therapy, an intervention programme or who were receiving relevant medication appears to contrast with Christchurch research which reported that only 29% of individuals with an identified psychiatric disorder during a six month period had a mental health consultation during that time (Hornblow, Bushnell, Wells, Joyce, 1990) and research which found single families had low levels of health care utilisation compared with two-parent families (Fergusson, Horwood, Beautrais & Shannon, 1981b). However, while the present result is heartening in regard to mental health care utilisation for women parenting alone, as utilisation was not reported in relation to a specific period of time or identified psychiatric disorders comparison with Hornblow et al.'s findings are limited. Furthermore, this

finding does not deny that women may still have a lower health care utilisation compared with two-parent families.

A large number of women reported a depressive episode in their history. This finding is consistent the Christchurch Psychiatric Epidemiology Study[10] (Wells, Bushnell, Hornblow, Joyce, & Oakley-Browne, 1989) which found a significantly higher lifetime prevalence of major depressive disorders in Christchurch compared with a number of other cities world-wide. Prevalence was especially high for women in the 24 to 44 year old age group. This group is one that closely resembles women in the present study. The high number of women reporting anxiety attacks is also consistent with the high lifetime prevalence of generalised anxiety for females reported in Wells et al.'s study.

Depressive episodes and anxiety attacks are more frequently reported in women's histories, whereas substance abuse is more frequently reported in the histories of a significant other in the child(ren)'s life. The person reported was mostly male and the substance usually alcohol. This finding supports research which has found that affective disorders are more prevalent for women and substance use disorders more prevalent for men (Noelen-Hoeksema, 1987; Oakley-Browne, Joyce, Wells, Bushnell & Hornblow, 1989).

Many women in the present investigation have a high level of depressive symptomatology. While high levels of self-reported depressive symptoms have also been found in Dunedin mothers (McGee, Williams, Kashani & Silva, 1983), the prevalence of potentially serious levels of depressive symptomatology was somewhat greater in the present study. The greater prevalence of depressive symptomatology

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[10] When considering findings relating to the psychological events in women's or a significant others' history it is important to keep in mind that the occurrence of psychological events was based on women's subjective reports rather than according to DSM-III diagnostic criteria which were employed in the Christchurch Psychiatric Epidemiology Study.

may be related to the unusually high prevalence of major depressive disorders, especially in women of this age group, which has been found in Christchurch (Wells et al., 1989).

High levels of general psychiatric symptoms are also reported by women. Subscale scores regarding the specific types of symptoms reported, indicate that the high levels of these symptoms are not an artifact of high levels of severe depressive symptoms. This finding is consistent with the high rate of generalised anxiety found in women in the Christchurch region (Wells et al., 1989). The prevalence of these symptoms draws attention to the links between other types of maternal psychiatric symptoms (e.g., anxiety) and child development as areas worthy of investigation.

The size of women's social networks are comparable with the network size of individuals in unemployed and student groups. However, women parenting alone are much more satisfied with the support they receive compared with individuals in these two groups. This finding is in accordance with research by the SROW (1975) who reported that nine out of ten women who had sought emotional guidance from a friend, relative or helping agency were satisfied with the guidance received.

One explanation for the high level of satisfaction with supports reported by these women compared with the unemployed and student samples may be that, rather than feeling dissatisfied with support that is available, women parenting alone accept what support is forthcoming and get on with life. This acquiesce, or possibly resignation, is illustrated by some women's responses to questions concerning how satisfied they were with support. These responses included "well, I have to be" and "I've got no choice".

Another explanation may be the ambiguity of the questions in the BSSQ concerning satisfaction with supports. It was not clear whether

'how satisfied?' referred to the amount or quality of support available. Many women stated they were satisfied with the support given by people in their network, although they felt it would be nice to have more people to turn to.

Whether insularity, as defined by Wahler and Dumas (1984: i.e., a low number of contacts and comparatively frequent and generally negative contacts with kin or helping agency representatives) is evident in the New Zealand context was not known. Socio-demographic factors associated with the participants in the present study place them at 'high risk' for insularity, namely they were all single parents and survived on a low income (Dumas & Wahler, 1983; Wahler et al., 1979). Because of this the first hypothesis predicted that *as a 'high risk' group women parenting alone would evidence insularity as defined by Wahler and Dumas (1984).* In contrast to this prediction, for the most part the data suggests that women parenting alone are not insular in terms of Wahler's definition of insularity. Women did not report more frequent contacts with helping agency representatives or kin compared with friends and generally rated their contacts with kin as positive. However, the tendency for women to give negative ratings to contacts with helping agency representatives is consistent with insularity.

The failure to find that women in the present study were insular may be attributable to the level of instrumental support available for women parenting alone in New Zealand. New Zealand has a generous welfare system compared to the United States. The provision of a benefit which allows women parenting alone to meet their families' basic living needs may result in less reliance on relatives for instrumental support, thus, contact with relatives may be less frequent. In addition, contacts with relatives may be more positive as they are less frequently associated with women requesting instrumental support which may mean contacts are more welcomed by kin and place less

stress on women compared with contacts during which such demands are made. The comparative generosity of government provided support may also result in less contact with helping agency representatives. Regrettably, in light of recent benefit reductions for women parenting alone, women's social interactions in the community may acquire a pattern more in line with insularity as it is found in the United States.

An alternative explanation for why insularity is not evident in a 'high risk' sample of New Zealand women may be design differences between the present study and previous research. Firstly, the present study was carried out on a self-selected community sample whereas insularity has previously only been examined in mothers of children with conduct problems. It is possible that, in the present study, the subgroup of women who have children with behaviour problems were insular but the inclusion of mothers of children without conduct problems masked these findings. Similarly, women had some (i.e., low income, unmarried) but not necessarily all the risk factors that are associated with insularity. It is possible that the pattern of community social contacts evidenced in New Zealand women with all the risk factors (i.e., women who also had a child referred to helping agency for behaviour problems and who lived in a high crime area) is consistent with insularity, but this is unknown.

One third of the children in the present study had no contact with their father. This finding is consistent with an earlier Christchurch study which found that one third of children with mothers who were parenting alone had no contact with their father (SROW, 1975). Unfortunately, further comparison with the Christchurch study is not possible as, other than 'no contact', the frequency of contact categories differed.

Women's perceptions of the quality of the father-child relationship ranged from good to poor. This finding is in accordance with local

research which reported women parenting alone made both favourable and unfavourable comments about contact between fathers and their children (SROW (1975).

Maternal ratings of child behaviour and social competence and teachers' ratings of child behaviour were similar for first, second, and third children. However, in several instances mothers had children who were no longer living with them or not in the appropriate age range for the assessment procedure. Thus, the oldest child assessed was not necessarily the mothers' oldest child. However, in all but two instances the oldest child assessed was the oldest child living with the mother at the present time. This finding suggests that mothers' and teachers' perceptions of child behaviour problems are not associated with the sibling order of the children who lived with their mother.

Summary and Conclusions

Socio-demographic information obtained in the present study supplements existing knowledge about women parenting alone. In general, findings are applicable to the majority of women who are parenting alone. However, selection criteria means that this sample does have certain distinct features. In particular, they are slightly younger and live in bigger households with more children than the average New Zealand woman parenting on her own.

The present study found that this group of women are better educated than New Zealand women in general and no more residentially mobile than the rest of the New Zealand population. Also, women parenting alone have a low income, low level of group membership and are not generally involved in an intimate relationship. Depressive episodes and anxiety attacks are frequently reported in women's histories and substance abuse in the histories of someone who is, or has been, in a significant relationship with their child(ren). This pattern of

psychological distress is consistent with local research. In addition, high levels of self-reported depressive and general psychiatric symptoms were found. Fortunately, involvement in counselling, therapy and intervention programmes is also frequently reported in the histories of women and significant others.

Despite women being at risk for insularity, the pattern of social contacts in the community suggest women parenting alone in New Zealand are not insular.

Findings more pertinent to the children assessed in the study include that the frequency of contact these children have with their father varies, as does their mothers' perception of the quality of the father-child relationship. Finally, women's and teachers' perceptions of child behaviour do not appear to differ according the sibling order of the children who are presently living with their mother.

SOME COMMENTS ABOUT THE RELATIONSHIPS BETWEEN WITHIN GROUP VARIABLES

A number of different aspects were assessed for each of the main variables. Although examining the relationship between these different aspects was not one of the aims of the current investigation, comments concerning some of these links are considered important to the investigation as a whole. Firstly, measures of social support and insularity were both included within the main variable group for social supports. Because the relationship between these variables has not previously been investigated, that these variables are linked was assumed on the basis of their face value. The strength of the correlations between aspects of emotional support and insularity found in the present study support the assumption that they are related concepts, although it is not so strong as to suggest they are measuring the same concept.

Secondly, life events often result in a change in social support (Thoits, 1982a). Although stress ratings are not associated with social support variables in the current research, this finding does not dispute the above relationship. Rather, all this suggests is that stress over a 12 month period is not related to uniform levels of emotional support or insularity. Stress experienced over a 12 month period may be associated with changes in social support over the same period of time. However, as measures were only taken on one occasion, this study is unable to state whether this is the case. Indeed, it was not the author's intention to do so.

Lastly, teachers' perception of children's behaviour, as an objective information source, conformed with maternal perception of child behaviour. This finding is consistent with other research that has reported maternal ratings of child behaviour are related to teachers' ratings of child behaviour (Conrad & Hammen, 1989; Forehand et al., 1990; Richters & Pellegrini, 1989; Schaughency & Lahey, 1985) and suggests that maternal ratings of child behaviour problems are more than just an artifact of mothers' negative perception bias. Conversely, the present study does not support research which has found that maternal and teacher's ratings of child behaviour are not related nor suggestions that the link between maternal depression and child behaviour problems is a result of women's depressed mood negatively colouring their perception of their children's behaviour (Fergusson, et al., 1985, Webster-Stratton, 1988).

THE RELATIONSHIPS BETWEEN MAJOR VARIABLES

Maternal Depressive Symptomatology and Child Behaviour

The hypothesis that *maternal depressive symptomatology will increase with increases in maternal ratings of child behaviour problems* was supported. Women's depressed symptoms did increase with increases in the amount of behaviour problems she considered her children to have. The link found between these two variables is in accordance with earlier studies with a community sample of mother-child dyads. Prior research has reported that maternal depressive symptomatology increased with increases in child behaviour problems in preschool children (Fergusson et al., 1984; Williams & Carmichael, 1985) and 6 year old children (Fergusson et al., 1985). Current findings extend conclusions of a linear relationship between maternal depressive symptomatology and child behaviour problems by reporting this association in families with children aged 4 to 17 years old, an age group which has not previously been studied before in a self-selected community population.

The link between maternal depressive symptomatology and child behaviour problems is also in accordance with studies which report this same covariance between maternal depressive symptomatology and child behaviour problems in mother-child dyads with recognised child behaviour problems (Dumas et al., 1989; Forehand et al., 1986a; Freidlander et al., 1986, Patterson, 1980). Additionally, in the current investigation, the findings that children of more severely depressed mothers have more behaviour problems conforms with research which has found that children of clinically depressed mothers have higher rates of, or are at greater risk for, behaviour problems compared with children of nondepressed parents (Billings & Moos, 1983, 1985; Caplan

et al., 1989; Cox et al., 1987; Hammen et al., 1987; Lee & Gotlib, 1989; Weissman et al., 1987; Zahn-Waxler, 1987).

Contradictory findings regarding whether or not maternal depression and teacher ratings of child behaviour are related have hindered definitive conclusions about this relationship. In the present study, maternal depressive symptomatology increased with increases in teachers' ratings of child behaviour problems. This finding is in line with research which has found this association in a self-selected community sample of mother-child dyads (Forehand et al., 1986b), dyads with a child conduct disorder (Schaughency & Lahey,1985), and with research which has reported that teachers rate more behaviour problems in children of clinically depressed parents compared with children of nondepressed parents (Hammen et al., 1987). Conversely, the current findings contradict research which has reported that maternal depressive symptomatology and teachers' ratings of child behaviour are not related in a community sample (Fergusson et al., 1985) or with mother-child dyads with child conduct disorders (Webster-Stratton, 1988). While research remains contradictory, the present investigation seems to tip the balance of findings toward the conclusion that teachers' ratings of child behaviour and maternal depression are related.

Although the present study found that maternal depressive symptomatology and teachers' ratings of child behaviour problems are associated, their covariance was not as strong as the covariance between maternal depressive symptomatology and maternal ratings of child behaviour. This may be a function of the different situations in which the behaviour is assessed, that is, home and school. The family and school environment play different roles in the life of a child, the former predominantly functioning to assist in children's social, spiritual and emotional development, the latter mainly functioning to educate. These functions place different demands behaviourally, emotionally and

otherwise on children. As a consequence, there is likely to be some variance in a children's behaviour between these settings. This may mean that children's problem behaviour is situation specific, occurring more in that environment where the mother's depressed behaviour also occurs. Therefore, the fact that maternal and teacher ratings of child behaviour are not more strongly correlated may be because they are actually seeing different behaviour rather than perceiving the same behaviour differently.

Alternatively, it could be argued that the weaker association between maternal depressive symptomatology and teachers' ratings of child behaviour problems compared with maternal ratings of child behaviour problems supports the view that this association is the result of depressed mothers having at least a partially distorted view of their children's behaviour (Brody & Forehand, 1986). However, this argument is not substantiated by recent research which has found that depressed women are no more likely to have a distorted view of their children's behaviour than nondepressed women (Conrad & Hammen, 1989; Richters and Pellegrini, 1989).

Contrary to research which has linked maternal depression with poor social competence in children (Goodman, 1987; Goodman & Brumley, 1990; Hammen et al., 1990), in the current research maternal depressive symptomatology and maternal ratings of social competence are not related. One reason for this discrepancy may be that the prevalence of women's depressive symptomatology was probably greater in earlier research compared with the present study. The current investigation assessed maternal depressive symptomatology (including subclinical depressive symptomatology) whereas Goodman (1987) and Goodman and Brumley (1990) were concerned with mothers who had a major depressive disorder. Similarly, although Hammen et al. (1990) also assessed depressive symptomatology, over a third of the

women in their study were diagnosed as having unipolar or bipolar depressive disorders, and an additional one fifth of women had a chronic medical illness. On the basis of these findings, it could be suggested that the link between maternal depression and child social competence occurs only in dyads with high levels of maternal depressive symptomatology.

Maternal Depressive Symptomatology and Maternal Social Supports

As the second hypothesis predicted (i.e., *maternal depressive symptoms will increase with decreases in the availability and quality of maternal social support*), several aspects of maternal social support were associated with maternal depressive symptomatology. Firstly, that the larger the number of women's social supports the lower her depressive symptomatology is consistent with community studies which have found that the availability of social supports is linked with lower levels of depressive symptomatology (Miller & Ingham, 1976; Warr & Parry, 1982; Turner, 1981).

Secondly, it was found that women's depressive symptomatology decreased with increases in her satisfaction with supports. Prior research pertaining to the relationship between satisfaction with supports and depression has found that clinically depressed patients are less satisfied with their support network compared with nondepressed individuals (Cornelis, 1989). By discovering satisfaction with social supports decreases with increases in depressive symptoms, including subclinical levels of depressive symptomatology, the current findings suggest that satisfaction with supports and depression have a linear relationship, thus are related not only in women who are severely depressed but in women with less debilitating depressive symptoms.

Current findings indicate that aspects of women's community social contacts are linked with maternal depression. In particular, increases in depressive symptomatology occur with increases in positive ratings of women's days and contacts. Thus, the quality of the contacts may have important implications in regard to women's depressive disorders, whereas the number of total or self-initiated contacts do not appear to be important.

Finally, women's depressive symptomatology increased with increases in the amount of stress experienced over the last 12 months. This findings is consistent with prior research which has reported that life events and depressive symptomatology are associated in this manner (Fergusson et al., 1984, 1985; Paykel et al., 1969; Warheit, 1979). However, as with earlier research, stress was assessed retrospectively, thus the possibility that women with more prevalent depressive symptoms were more likely to both recall life events and rate them more stressful must be considered.

Maternal Social Supports and Child Behaviour

Although there is a lack of research concerned with the relationship between maternal social supports and child behaviour, the general trend lent itself to the hypothesis that *maternal ratings of child behaviour problems will increase with decreases in the availability and quality of maternal social supports.* Several findings in the current investigation support this hypothesis, therefore, conform with this trend.

Firstly, the tendency for maternal ratings of child behaviour problems to increase with decreases in the size of women's support network and satisfaction with support is consistent with the above hypothesis and thus, in accordance with related research. Earlier investigations have found that infants of mothers with inadequate social

supports evidence insecure attachment (Crittenden, 1985; Crockenburg, 1981) and a greater amount of negative peer behaviour (Lamb et al., 1988) compared with infants of mothers with adequate social supports. Studies have also found that child behaviour problems increase with decreases in the quality of parents' marital relationship (Bond & McMahon, 1984; Emery, 1982; Johnson & Lobitz, 1974; Porter & O'Leary, 1984). The association between women's amount of, and satisfaction with, extra-familial social supports and behaviour problems in 4 to 17 year old children augments the aspects of maternal social support and age range of children in which this link has been evidenced. In addition, the relative strength of these associations reveals that women's network size is more closely related to maternal ratings of child behaviour than women's satisfaction with supports.

Secondly, women who rated their day or contacts negatively considered their children to have more behaviour problems compared with women who rated their day and contacts positively, which is also consistent with the above hypothesis. The association between mothers' community contacts and child behaviour problems has previously been highlighted (Wahler et al., 1979; Wahler, 1980a; Dumas, 1986; Dumas & Wahler, 1983; Panaccionne & Wahler, 1986). Unfortunately, the design of the present study limits comparisons with Wahler and colleagues research (i.e., it did not include observations of mother's or children's behaviour, or assessments of the relationship between community contacts and dyads behaviour on more than one occasion).

It is interesting to note that valence of day and mean valence of contacts are the same aspects of maternal insularity that were associated with women's depressive symptomatology. In addition, as with maternal depressive symptomatology, the valence of day was more closely related to maternal ratings of child behaviour compared with the mean valence of contacts.

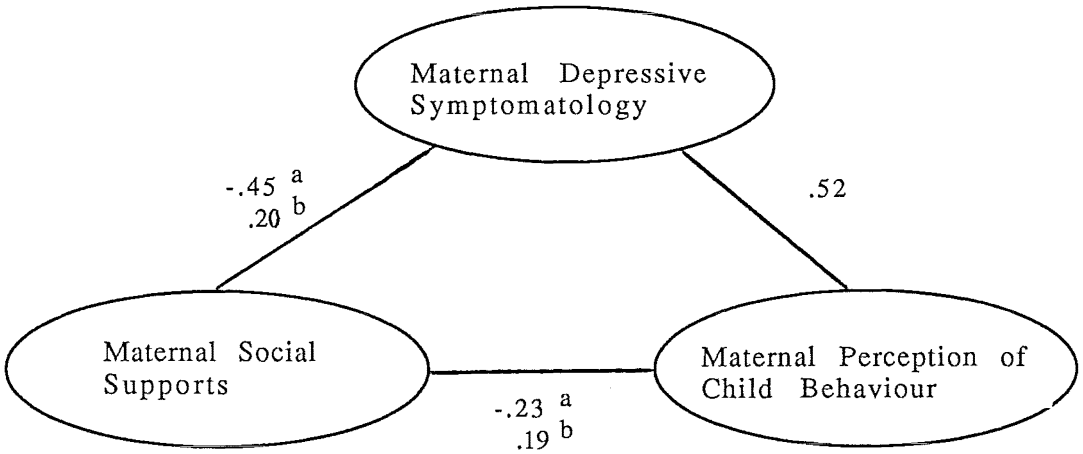
Thirdly, maternal ratings of child behaviour problems increase with the increases in the amount of stress women experienced over the last 12 months. This finding is in accordance with research which has found increases in family life events were associated with increased maternal ratings of child behaviour problems (Fergusson et al., 1985), maternal reports of child-rearing problems (Fergusson et al., 1984) and maternal perception of child maladjustment (Gersten et al., 1974, Gersten et al., 1977; Sandler & Block, 1979).

Fourthly, increases in the size of women's social network and satisfaction with supports are linked with decreases in teachers' ratings of child behaviour problems. These links parallel those found between women's network size and satisfaction with supports with maternal ratings of child behaviour. Furthermore, as with maternal ratings of child behaviour, teachers' ratings were more closely associated with women's network size compared with women's satisfaction with supports. However, it is important to note that the links between women's social supports and teachers' ratings of behaviour are much weaker than those found between women's social supports and maternal ratings of child behaviour. As previously discussed, this is not surprising considering children's behaviour is being rated in two distinctly different settings.

Teachers' ratings of child behaviour and women's stress ratings were not related. This finding contrasts with Fergusson et al. (1985) who documented an association between teachers' ratings of child behaviour and family life events. One reason why a link between family life events and teachers' ratings of child behaviour problems was not found may be that the present study failed to employ a validated measure of life events whereas Fergusson et al. utilised a reliable and valid measure of life events.

Summary

Maternal depression, maternal social supports and maternal ratings of child behaviour were related to each other in the predicted fashion. The model below illustrates the nature these relationships. Correlation coefficients included in this model indicate the strength of these associations, the strongest links being between maternal depressive symptomatology and maternal perception of child behaviour, and maternal depressive symptomatology and the size of their support network.



[a]Network size, [b]Satisfaction with supports.

THE INTERRELATIONSHIP BETWEEN MATERNAL DEPRESSIVE SYMPTOMATOLOGY, MATERNAL SOCIAL SUPPORTS AND CHILD BEHAVIOUR

There were three hypotheses concerned with the interrelationship between maternal depressive symptomatology, maternal social supports and maternal ratings of child behaviour. The data support the first hypothesis, which is *that maternal depressive symptomatology and maternal ratings of child behaviour will have a reciprocal relationship, independent of maternal social supports.* Stepwise multiple regression

analysis revealed that maternal depressive symptomatology was the principal determinant of maternal ratings of child behaviour. This finding is consistent with research which has found that maternal depressive symptomatology accounted for a significant proportion of the variance in maternal ratings of child behaviour (Fergusson et al., 1984; Forehand et al., 1982; Friedlander et al., 1986; Longfellow & Szpiro, 1987; Panaccione & Wahler, 1986; Schaughency & Lahey, 1985), and research which has found that the presence of a parental depressive disorders accounted for a significant proportion of variance in the occurrence of child disturbance (Billings & Moos, 1983; Caplan et al., 1989). It is also consistent with longitudinal research which has reported that maternal depression was a correlate of child behaviour problems from infancy to 6 years of age (Zahn-Waxler, 1987). Lastly, this finding is in line with two studies which utilised causal path analysis in the investigation of the relationship between mothers and their children. Forehand et al. (1986a) reported a significant path going from maternal ratings of depressive symptomatology to maternal ratings of child maladjustment in mother-child dyads receiving treatment for child noncompliance. Hammen et al. (1990) reported significant paths between maternal functioning, which included maternal depressive symptomatology on the BDI, to child outcome, which included maternal ratings of child behaviour on the Child Behaviour Checklist.

Secondly, the principal determinant of maternal depressive symptomatology was maternal ratings of child behaviour. This finding is consistent with recent research which has reported a significant path from child characteristics, which included observed child behaviour, to maternal characteristics, which included maternal depressive symptomatology, (Hammen et al., 1990). These results also support ecological theorists who have proposed that children, as part of their

mother's social environment, influence mothers' psychological development (Brofenbrenner, 1986; Salzinger et al., 1980).

Research has previously reported that maternal depressive symptomatology accounts for a significant proportion of the variance in maternal ratings of 6 year old children's behaviour in a community sample (Fergusson et al., 1985), and the reciprocal influence maternal depressive symptomatology and maternal ratings of child behaviour have on each other in a group of dyads with mainly unipolar or bipolar depressed, or chronically medically ill mothers (Hammen, et al., 1990).

The current investigation augments previous investigations of the bidirectional relationship between maternal depression and maternal perception of child behaviour in that these variables are reported as predictors of each other in a self-selected community sample. The bidirectional nature of this relationship has not previously been reported in a self-selected sample. The present study has also found that these variables are significant predictors of each other, independent of their relationship with maternal social supports

The second hypothesis was that *maternal depressive symptomatology and maternal social supports will have a reciprocal relationship with each other, independent of maternal ratings of child behaviour*. Results of the present study are in accordance with this hypothesis, for at least certain aspects of maternal social supports. Specifically, women's network size accounted for a significant proportion of the variance in maternal depressive symptomatology, and maternal depressive symptomatology accounted for a significant proportion of the variance in women's network size. In both instances the variance accounted for was independent of the variance accounted for by maternal ratings of child behaviour.

The reciprocity of this relationship is consistent with Turner (1981) who reported firstly, that the current level of social support

contributed to the prediction of current psychological well-being (which included the prevalence of depressed symptoms) beyond that which was predicted by psychological well-being and social support measures obtained three years earlier. Secondly, Turner reported that current psychological well-being contributed to the prediction of current social support beyond that which was predicted by social support and psychological well-being measures obtained three years earlier. The influence of women's network size on maternal depression is also supported by Brown et al. (1989). They found that emotional support predicted a significant proportion of variance in patients depressive symptomatology, beyond that which was accounted for by socio-demographic variables and medical status.

Other aspects of social support did not have any additional predictive power beyond that accounted for by network size, stress and child behaviour variables. Correlations between satisfaction with supports and maternal depressive symptomatology are mediated by the effect of network size, stress, and maternal ratings of child behaviour.

The third hypothesis argued that *maternal social supports and maternal ratings of child behaviour would have a reciprocal relationship with each other, independent of maternal depressive symptomatology.* Stepwise multiple regression analysis revealed that this was not the case, thus supporting the null hypothesis. When accounting for the influence of maternal depressive symptomatology, maternal social supports did not account for a significant proportion of the variance in maternal ratings of child behaviour, and maternal ratings of child behaviour did not account for a significant proportion of the variance in maternal social supports. Thus, not only was there not a reciprocal relationship between these two variables, but a relationship in either direction did not exist. This suggests that women's network size and satisfaction with supports do not contribute to the prediction of

maternal ratings of child behaviour beyond that which is able to be predicted by maternal depression. Similarly, maternal ratings of child behaviour do not contribute to the prediction of women's network size and satisfaction with supports beyond that which is able to be predicted by maternal depression.

Closer inspection of the differences between the current study and previous research which has reported either one of these relationships, may elucidate reasons for the contradictory findings. Firstly, the present study assessed extrafamilial support. For the most part prior research has been concerned with intrafamilial support which has included the supportiveness and cohesion of the immediate family environment (Billings and Moos, 1983; Fendrich et al., 1990) and marital adjustment (Caplan et al., 1989; Fendrich et al., 1990; Hops et al., 1987; Pound et al., 1987; Christensen et al., 1983). It may be that *intrafamilial* social support is predictive of maternal ratings of child behaviour (independent of women's depressed status) and/or that maternal ratings of child behaviour are predictive of intrafamilial support (once again, independent of women's depressed status), whereas *extrafamilial* support is not.

Secondly, Billings and Moos (1983) found that although parental depression was the principal determinant of parental ratings of child behaviour, parental social support had an additional influence on maternal ratings of child behaviour. However, whereas the present study was concerned with maternal depressive symptomatology (including subclinical levels of symptomatology) in a self-selected community sample, Billings and Moos reported that social support added to the risk if the parent was already clinically depressed. It could then be argued that social support has an effect on maternal ratings of child behaviour only with clinically depressed mothers. However, this explanation is not substantiated by Fendrich et al.'s (1990) findings.

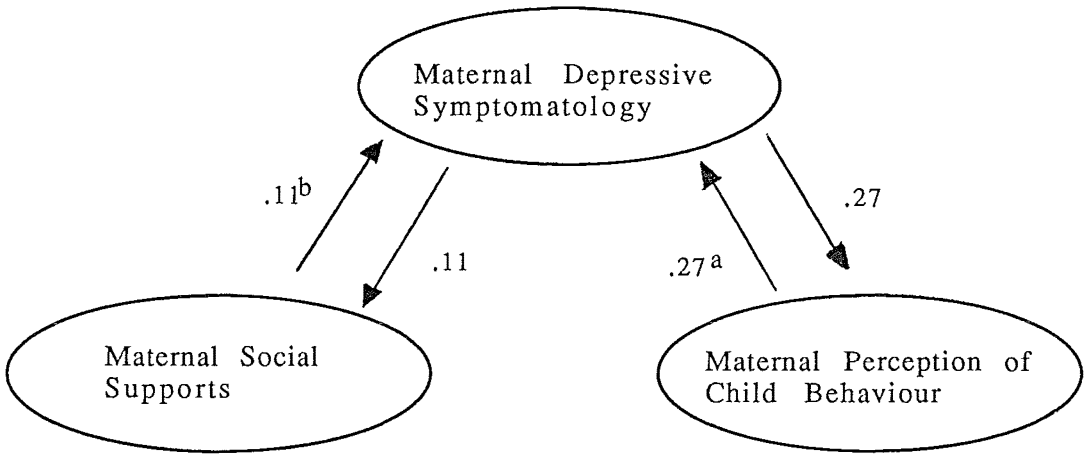
They found that for combined groups of children of depressed and nondepressed parents, family risk factors were predictive of any diagnosis, but when children were grouped according to parental depression status, family risk factors were more important for children with a nondepressed parent. Thus, in contrast to the earlier postulate, this finding suggests the opposite: family social supports are *more* influential for children of mothers with low levels of depression (it should be noted that Fendrich et al. were investigating risk for child psychopathology rather than child behaviour problems). Thus, on the basis of the relevant research, neither proposition is clearly supported.

An alternative explanation for the contradictory findings may be that the separate consideration of different aspects of social support variables resulted in understating the ability of maternal social support variables to predict maternal ratings of child behaviour and, conversely, maternal ratings of child behaviour to predict the ratings of maternal social supports. Using a composite of social support variables may result in finding that maternal social supports are able to account for a significant proportion of the variance in maternal ratings of child behaviour and that maternal ratings of child behaviour are able to account for significant proportion of the variance in maternal social supports, beyond that accounted for by maternal depression.

Finally, maternal depressive symptomatology or maternal ratings of child behaviour were not principal determinants of other aspects of social support. Apparent correlations with satisfaction with supports are explained by the mediating effect of women's network size.

Thus, in regards to the predicted relationship between maternal depressive symptomatology, maternal social supports and maternal ratings of child behaviour problems the results of the present study are in accordance with two of the three hypothesis. The model below

illustrates the nature of these relationships. Figures indicate the proportion of variance accounted (i.e., R^2).



[a]principal determinant, [b]secondary determinant.

As shown in this model, maternal depressive symptomatology is predictive of both maternal social supports and maternal ratings of child behaviour, independent of the predictive power of the remaining variable in this group. In contrast, maternal social supports and maternal ratings of child behaviour problems are not predictive of each other when the predictive power of maternal depressive symptomatology is accounted for.

ADDITIONAL FINDINGS

The relationship between variables not central to the main hypothesis were also explored. Stepwise multiple regression revealed that maternal depressive symptomatology and women's network size influenced women's stress ratings. The effect of women's stress rating on maternal depression is consistent with research which has found that life events are predictive of an individual's depressive outcome (Warheit, 1979).

Maternal depressive symptomatology was the principal determinant of maternal stress ratings, and network size the secondary determinant. However, these findings may misrepresent the influence of social supports on stress ratings for two reasons. Firstly, social support variables were entered separately into the regression equation. A composite of social support variables may have accounted for a greater proportion of the variance of maternal stress ratings than maternal depressive symptomatology accounted for. Secondly, the present study did not utilise a comprehensive or validated measure of stressful life events. As such, stress ratings may not reliably reflect the amount of stress in women's lives over the last 12 months.

The size of women's network was predictive of maternal ratings of child social competence. The larger a women's network size the more socially competent she rated her children to be. Maternal depressive symptomatology did not contribute to the prediction of maternal ratings of social competence beyond that which was predicted by women's network size. This findings contrasts with Hammen et al. (1990) who found there was a significant path from maternal characteristics, which included maternal ratings of depressive symptomatology on the BDI, to child outcome, which included maternal ratings of child social competence on the Child Behaviour Checklist. However, Hammen et al. did not consider the intervening role maternal social supports plays in these relationships. Consideration of maternal social supports may have resulted in findings consistent with the present study.

Finally, maternal ratings of child behaviour accounted for a significant proportion of variance in teachers' ratings of child behaviour whereas maternal depressive symptomatology did not. This result is consistent with Fergusson et al. (1985) who reported that maternal depression did not account for a significant proportion of variance in teachers' ratings of child behaviour. Unfortunately, the authors did not

report whether maternal ratings of child behaviour accounted for a significant proportion of variance in teachers' ratings of child behaviour.

IMPLICATIONS FOR TREATMENT

It was stated earlier that the interrelationship between maternal depressive symptomatology, maternal social supports, and maternal ratings of child behaviour has important implications in regard to understanding the etiology of, and enhancing treatment efficacy for, maternal depression and child behaviour problems. Therefore, the present findings will now be discussed in regard to their potential utility for the assessment of, and treatment for, maternal depression and child behaviour problems.

Firstly, as maternal depression is associated with maternal social supports and maternal ratings of child behaviour, assessment of maternal depression which includes these variables will possibly provide important information pertaining to the onset and maintenance of the depressive disorder. Knowledge of how these variables interrelate may guide treatment by highlighting features which are problematic in the women's life (i.e., behaviourally disordered children and/or inadequate social supports), which suggests that improving these features could play a role in alleviating the depression. The link between maternal depression and maternal perception of child behaviour problems indicates the importance of assessing the entire family system, and if appropriate, designing a treatment plan that incorporates the related family dysfunctions rather than only dysfunctions associated directly with the mother. The failure to identify and alter dysfunctions associated with other family members which may be contributing to women's depression may hinder the efficacy of any intervention in alleviating depression in the short and/or long term.

More specifically, assessments which indicate that child behaviour problems are a dysfunctional aspect of the family unit suggest that any intervention programme needs to compensate for how these problems contribute to the depressive disorder and design interventions to modify their detrimental affect on the mother, and the family in general. The suggestion that reducing child behaviour problems may function to reduce maternal depression is supported by Patterson (1980) who found that the severity of mother's depression decreased following their involvement in training and supervision of child management skills.

Secondly, the association between maternal depressive symptomatology and social supports suggests that enhancing women's social supports may play a role in moderating depressive symptoms. In particular, the relationship between network size and maternal depressive symptomatology indicates that increasing the availability of supportive people in a women's social network may be of primary importance, and improving the women's satisfaction with these support of secondary importance.

Additionally, the link between aspects of women's community interactions has potential implications for intervention programmes aimed at reducing women's depression. Rather than the frequency of contacts, it is the quality of these contacts that are associated with women's depression. Improving the quality of women's social contacts may function to reduce depressive symptoms.

Thus, child behaviour problems and maternal social supports are both potentially important in any treatment plan for alleviating maternal depression. The relative strength, and therefore relative importance, of both these associations was elucidated using stepwise multiple regression analysis. The regression model revealed that maternal ratings of child behaviour was the principal determinant of

maternal depressive symptomatology, with women's network size of secondary importance (women's stress was also included in this model, and was of the third importance). This suggests that maternal ratings of child behaviour has a greater effect on maternal depression compared with maternal social supports. Thus, child behaviour problems may play a greater role in the onset or maintenance of maternal depression. On the basis of these findings if it is not possible or realistic to target both these factors in treatment, focusing upon child behaviour problems may prove most effective in alleviating maternal depression.

The effect of maternal depression on maternal perception of child behaviour problems highlights the importance of assessing maternal depression when a child is referred for behaviour problems. The success of any intervention plan must incorporate developing and maintaining a healthy family system if the changes in the child's behaviour are to persist. More specifically, these results suggest that reducing the mothers' depressive symptomatology may be linked with a reduction in the child's behaviour problems.

Although, the relationship between maternal social supports and maternal perception of child behaviour is mediated by maternal depression, that they are related in the first instance has important implications for treatment. Improving maternal social supports may be a way in which to indirectly reduce child behaviour problems by helping to reduce maternal depression. Awareness of the links between network size, satisfaction with social supports and the quality of community social contacts with child behaviour problems, as mediated through maternal depressive symptomatology, has potential value for the efficacy of intervention programmes designed to reduce child behaviour problems. As stated earlier, the current findings suggest that rather than increase the frequency of contacts, enhancing the availability of contact with people women perceive as supportive and

whose support they feel satisfied with, and the frequency of positive contacts rather than the total number of contacts may be important in alleviating her depression, and thereby indirectly function to reduce child behaviour problems. Indirect support for the potential benefit of this form of intervention comes from three sources. Firstly, positive social contacts are known to be related to the persistence of desirable changes in mothers' and children's behaviour (Wahler et al., 1979; Wahler, 1980a; Dumas & Wahler, 1983). The success of Lyons et al.'s (1990) intervention programme with mother-child dyads at 'high risk' for insecure infant attachment, especially depressed mothers offers additional support. Lastly, consistent with this postulate, Cox et al. (1987) reported that child behaviour problems alleviated with maternal depression.

Finally, knowledge that a high number of stressful family life events is associated with a greater prevalence of child behaviour problems and maternal depressive symptomatology, could enable the identification of 'at risk' mothers and children (the identifying factor being the occurrence of a high number of stressful life events), and following, implementation of prevention or early intervention programmes aimed at reducing maternal depression and/or child behaviour problems.

THE EFFECTS OF CHILD AGE AND GENDER

While investigating the effect of child age and gender was not the main aim of this research, with relevant information on hand the opportunity to explore any within-family differences was seized. No specific hypotheses were being tested. However, a number of potential scenario's, based on superficial, rather than indepth, consideration of how maternal depressive symptomatology and maternal and teachers'

ratings of child behaviour may interact with child age and gender are incorporated in the interpretation of any effects that were found.

There was a partial trend for increases in women's ratings of child behaviour to be greater as both child age and severity of maternal depression increased compared with when only one increased and the other remained constant. Data followed this pattern for children aged from 4-12 years of age, whereas the data for 13 to 17 year old children are not consistent with this pattern.

An explanation for this trend could be that as many depressive disorders are chronic or recurrent (Rutter, 1990) women with potentially serious depressive symptomatology were likely to have previously experienced high levels of depressive symptomatology. Therefore older children of potentially seriously depressed mothers would have had prolonged exposure to maternal depression. Thus, it could be argued that women's level of depression and child age would have an interaction effect on child behaviour with behaviour problems increasing as a combined function of an increase in child age and mother's depressive symptomatology.

There are several reasons why the interaction found does not fully support this hypothesized interaction. Firstly, the premise that women in the current study with more prevalent depressive symptoms were likely to have experienced more depression in the past is speculative, Women with currently high levels of depressive symptomatology may not have had high levels in the past. Alternatively, women with low levels of depressive symptomatology may have previously experienced high levels. Thus, the premise that older children with more depressed mother's had experienced prolonged exposure to maternal depression is also speculative.

It must also be considered that, as with studies concerned specifically with more severe depressive disorders, child age may not be

a crucial factor in the level of child behaviour problems. Studies with clinically depressed mothers which have examined the effect of child age have found that children with current diagnosed psychiatric disorders were evenly distributed across all ages (Hammen et al., 1987; Billings & Moos, 1983; Cytryn et al., 1984). Although the present study differed from these studies in that it looked at less severe dysfunctions, the failure of any clear relationship to emerge gives rise to the possibility that the interaction effect with age was just a chance finding. Furthermore, the interaction effect of maternal depressive symptomatology and child age on teacher ratings, whilst significant, follows a pattern which is even less supportive of the hypothesized link between child age, maternal depression and child behaviour problems.

For teachers' ratings of child behaviour, problem behaviour increases with age, and until the age of 12 years is higher for boys than for girls. This gender difference is consistent with Forehand et al. (1986b) who reported that teachers rated more conduct problems for boys compared with girls. In addition, the higher ratings of behaviour problems for boys is in line with research which has reported a greater male prevalence in most categories of child psychopathology, including both antisocial behaviour and neurotic disorders (Eme, 1979). Whilst the finding that adolescent girls were rated as having the worst behaviour out of all the age x gender groups appears at odds with Eme's conclusions, the greater prevalence of behaviour problems for adolescent females may be a function of adult gender differences in the prevalence of neurotic and affective disorders which begin to emerge in adolescence. (Eme, 1979; Weissman et al., 1987). Unfortunately, as the present study did not analyse child behaviour according to 'type' of problem (i.e., internalising or externalising) the different type of problems that are manifest in boys and girls are not shown. Thus,

whether the the higher rate of behaviour problems in adolescent females is a function of increasing internalising problems is not known.

The interaction effect of age and gender on teachers' ratings of child behaviour may be a function of greater exposure to those factors which have contributed to the problem (e.g., poor parenting, undesirable peer group). Although, the data suggests that for teacher ratings greater exposure to maternal depression does not have an effect.

Lastly, in contrast to teachers' ratings of child behaviour problems, child gender and/or age did not have an effect on maternal ratings of child behaviour problems. This finding is consistent with other research that has reported that the effect of parental depression on child behaviour did not vary with child gender (Billings & Moos, 1983; Lee & Gotlib, 1989; Zahn-Waxler et al., 1984). However, it seems at odds with research which has found boys have a more behaviour problems than girls (Eme, 1979). It may be that parental depression has a more detrimental effect on girls and as a consequence the gender differences in child psychopathology may not exist in this specific group of children.

SUMMARY AND CONCLUSIONS

Findings regarding women parenting alone have been summarised earlier in the discussion and thus, to avoid repetition, are not summarised here. It is sufficient to say that it is hoped that this information goes some way towards providing a more accurate picture of who these women are and of the features of their lives. If this information helps clarify or dispel myths and negative stereotypes about this group in New Zealand society this research has been of value.

The main purpose of this research was to investigate the relationship between maternal depressive symptomatology, maternal social supports and maternal ratings of child behaviour. More specifically, the investigation of these variables was driven from the

desire to understand how they were interrelated. To summarise, firstly, the three main variables were related as predicted. Increases in maternal depression were associated with decreases in the availability and quality of their social supports and with increases in child behaviour problems. Decreases in the availability and quality of maternal social supports were linked with increases in child behaviour problems. Secondly, the proposed model of the interrelationship between the three main variables was partially supported. Maternal depressive symptomatology and maternal ratings of child behaviour had a reciprocal relationship, independent of the third variable, as did maternal depressive symptomatology and maternal social supports. However, the relationship between maternal social supports and maternal ratings of child behaviour could be accounted for by the mediating effect of maternal depressive symptomatology.

It is proposed that the nature of these relationships may have important implications for the assessment and treatment of both maternal depression and child behaviour problems by highlighting features which should be included in assessment, and identifying potentially effective ways in which to alleviate these dysfunctions.

LIMITATIONS OF THE CURRENT RESEARCH

One of the greatest limitations of the present study is that the design features limit the generalisation of findings. To fulfill a minor aim of this study, namely to obtain information about women parenting alone, the present study investigated the relationship between maternal depressive symptomatology, maternal social supports, and child behaviour specifically in mother-child dyads of women who were parenting alone. This study has not explored the relationship between mothers and their children in two-parent families, which remains the most common family type in western society, or in other alternative

family types. Because of this, findings can only reliably be generalised to the mother-child relationship in families with women who are parenting alone.

A second limitation of the present study is the method of participant selection. Women for the most part were self-selected. This method of recruitment may have resulted in only certain types of women participating in the study. While the current investigation was concerned with social support and insularity, it is possible only women who are more sociable responded[11]. Also, women who felt they were coping well may have been more willing to participate as they felt less threatened about being questioned about their life. Alternatively, women who considered they were not coping may have been more likely to respond having anticipated gaining something from the research that may have helped them manage better. Furthermore, a small number were referred from friends which may have further biased the sample toward women of similar social or demographic backgrounds. However, there was no evidence that these women were demographically nonrepresentative.

Different family arrangements which became evident during the interviewing stages made within family comparison limited. As many children were no longer living with their mother or too old for the assessment procedure the oldest child assessed was not necessarily the mothers' oldest child.

There were a number of limitations in the questionnaires utilised. Firstly, although women's stress rating was found to have a relationship with many of the variables, and an effect on the outcome of the prevalence of depressive symptomatology and size of women's support network, the present study did not utilise a comprehensive or validated

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[11] It was hoped payment for participation in the study would encourage a response from women otherwise less inclined to take part in the current research.

measure of stressful life events. As the reliability of the stress ratings is not known, findings which include the stress ratings variable are tentative.

Secondly, although maternal ratings on the CBCL and teachers' ratings on CTRS are frequently used together, the tests are not designed as parallel measures of child behaviour. That these two measures are based on the same conceptualisation of problem behaviour, and that problem behaviour is measured by these two ratings scales in a comparable way, is an assumption.

The present study has several statistical limitations. Firstly, separate consideration of the social support variables does not reflect how social support, as a unitary concept, is related to the other major variables. Similarly, the separate entry of social support variables in stepwise multiple regression equations rather than entry of a composite may have misrepresented the overall predictive power of social support in regard to the other major variables. Furthermore, separate consideration of insularity variables placed the same limitations on both the links between insularity and the other variables under investigation, and the overall predictive power of insularity in the regression analyses.

DIRECTIONS FOR FUTURE RESEARCH

Information presented in regards to the social characteristics of women parenting alone is in no way comprehensive. More research is needed to provide a fuller and more accurate picture of New Zealand women (and men) who are parenting alone, especially if decisions and statements that concern this group are to be based on fact rather than popular misconceptions.

This study was a pioneering study of insularity in New Zealand. Further investigations specifically designed to investigate this concept are needed to determine whether insularity is a relevant concept for 'at

risk' or other groups in the New Zealand context. In particular, matching the sample population more closely with the 'at risk' factors identified by Wahler et al. (1979) may elucidate whether insularity consistent with the United States is evident in New Zealand.

The present study found that there was an influence of maternal ratings of child behaviour and maternal social supports on maternal depressive symptomatology and maternal ratings of child behaviour on maternal depressive symptomatology. While maternal ratings of behaviour are consistent with teachers' ratings of behaviour, research is needed to determine if this interrelationship is generalisable to child's actual behaviour rather than only the mother's perception of the child's behaviour. Investigations which include home or laboratory observations of child behaviour would be best suited for this purpose.

It is suggested that future research which utilises a composite of social support and insularity may more accurately present the interrelationship between these concepts, maternal depression and child behaviour problems.

Multiple regression has identified the ability of each of the main variables to predict the outcome of the other variables, however, this does not necessarily imply the variables are causally related. Research which utilises path analysis may elucidate the causal role each variable has on the outcome of another. The importance of this research would be added to by identifying the causes of maternal depression, child behaviour problems, and poor social supports since this would have important implications for the prevention and treatment of these dysfunctional aspects of an individual's and family's life.

Individuals' social environments are dynamic. As a cross-sectional design this study, as with other cross-sectional research, does not have the capacity of longitudinal research to reflect how these variables interact over time. Longitudinal research which comprehensively

investigates the entire family system is needed in order to discover how the interrelationship between these variables changes over time, and to identify the factors which are associated with these changes

Finally, this study investigated the role that child age and gender play in the relationship between maternal depression and maternal and teacher ratings of child behaviour. Although the findings were not at all easy to interpret, the present research did attempt to address the issue of within-family differences. Clearly, as not all children with depressed mothers have child behaviour problems, and likewise, not all mothers of children with behaviour problems have high levels of depressive symptomatology, continued research regarding within-family differences is needed if child gender or age are to be discounted as factors that are related to resilience in mother-child dyads from maternal depression and child behaviour problems.

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Appendices

Appendix One

PEGASUS POST,

MONDAY, SEPTEMBER 3 1990

NEWS

Single mothers wanted

Single mothers in the Woolston, Bromley, Linwood and Aranui areas are needed to take part in a research project being carried out by a Canterbury University student.

Deirdre Richardson is carrying out the research as part of her thesis for a MA in psychology.

By speaking to single mothers not in paid employment and with at least two school aged children, Ms Richardson hopes to better understand how mothers and children affect each other's well-being, behaviour and other aspects of their day to day living.

Anyone offering to take part in the research will receive a small payment and will have to be free for about two hours.

Ms Richardson can be contacted during the day at 667-001 ext 7197 or at home 355-5231.

The Observer
August 27, 1990

Single mothers needed

Single mothers in the Woolston, Bromley, Linwood and Aranui areas are needed to take part in a research project being carried out by a Canterbury University student.

Deirdre Richardson is carrying out the research as part of her thesis for a MA in psychology.

By speaking to single mothers not in paid employment and with at least two school aged children, Ms Richardson hopes to better understand how mothers and children affect each other's well-being, behaviour and other aspects of their day to day living.

Anyone offering to take part in the research will receive a small payment and will have to be free for about two hours.

Ms Richardson can be contacted during the day at 667-001 ext 7197 or at home 355-5231.

12 OBSERVER, MONDAY, OCTOBER 22 1990

NEWS

Single mothers

Single mothers in the south and west of Christchurch are being sought to take part in a research project being carried out by a Canterbury University student.

Deirdre Richardson would like to thank those mothers who have already participated in the study which is being undertaken as part of the thesis requirements for a MA in psychology.

Through her research Ms Richardson is hoping to better understand how mothers and their children affect each other's well-being, behaviour and other aspects of their day to day living.

Ms Richardson is interested in interviewing mothers parenting on their own who have at least two children aged between 5-16 years.

Any personal information gathered will remain strictly confidential to the researcher

Any women interested telephone 667-001 ext 7197 or 355-5231.

THE Christchurch MAIL,
Monday September 3, 1990

LETTERS

Mothers

Sir: I am a graduate student at the University of Canterbury interested in the relationship between mothers and their children. I am trying to better understand how mothers and their children affect each other's well-being, behaviour and other aspects of their day-to-day living. I am specifically interested in families of children with mothers who are parenting on their own because this type of family is now common.

I would like to interview mothers parenting on their own who have at least two children between 5 and 16 years and are living in Aranui, Bromley, Linwood or Woolston areas. In this interview I will ask each mother about a number of areas including her own well-being and health; the behaviour of each child; stressful events over the last year, and so on. Each interview will take approximately two hours, not necessarily all at one time. As this is a long time each mother will receive a small sum of money for taking part in the study.

This study is being undertaken independently of any government agency. Any personal information gathered will remain strictly confidential to the researcher and the mother. Any information that is made public will not identify any individual or family. The general results of this study will be published as part of my studies at the university. Each mother will receive a brief report on the general findings of the study. Also any interested organisations will be able to receive a brief report of the findings. Once again these general findings will not identify any individual or family.

Mothers interested in taking part should contact me by telephoning 667-001 extension 7197, or 355-5231, or by writing to me at 112 Cranford Street, Christchurch 1.

Yours etc
Deirdre Richardson

THE Christchurch MAIL, Monday October 15, 1990

Research

Sir: Earlier this year a letter appeared in your paper regarding a study I am undertaking as a graduate student at the University of Canterbury. This is concerned with the relationship between mothers and their children. I would like to thank mothers and other interested parties who responded to my letter and special thanks to those who have participated. Secondly, I would like to invite more women from areas further afield who would like to take part in the study. I am interested in interviewing mothers parenting on their own who have at least two children between five and 16 years, living in Christchurch, preferably the south and west which would include Addington, Spreydon, Hoon Hay, Rowley, Halswell, Hornby and Riccarton. Each interview will take about two hours, not necessarily at one time. Each mother will receive a small sum of money for taking part in the study — which is being undertaken independent of any government agency. Any personal information gathered will remain strictly confidential.

I can be contacted by telephoning 667-001, extension 7197 or 355-5231, or by writing to me at 112 Cranford St, Christchurch 1.

Yours etc
Deirdre Richardson

Appendix Two

MOTHER-CHILD RELATIONSHIP STUDY

Hi, my name is Deirdre Richardson and I am a student at the University of Canterbury. I am interested in the relationship between mothers and their children. I am trying to better understand how mothers and their children affect each other's well-being, behaviour and other aspects of their day-to-day living. I am specifically interested in families of children with mothers who are parenting on their own because this kind of family is now a very common one.
I would like to visit mothers who are parenting on their own and ask them some questions. These questions are concerned with a number of areas including the mother's well-being and health; the behaviour of each child the mother has living at home between 5 and 16 years of age; where she lives, any stressful events she has had in the last year, and so on. If the mother is agreeable a brief questionnaire will also be sent to each child's school teacher.

HOW MUCH TIME WILL THIS TAKE
Approximately two hours. As this is quite a long time each mother will receive a small sum of money for taking part in the study.

WHAT HAPPENS TO THE INFORMATION
This study is being undertaken independently of any governement agency. Any personal information gathered will remain strictly confidential to the researcher and the mother. Any information that is made public will not identify any individual or family.
The general results of this study will be published as part of my studies at the University. Each mother will receive a brief report on the general findings of the study. Also, any interested organisations will be able to receive a brief report of the findings. Once again these general findings will not identify any individual or family.

WHO CAN TAKE PART
If you are a mother who is parenting on her own with at least two children between the age of 5 and 16 years you are invited to take part in this study.

HOW DO YOU TAKE PART
You can contact me by phoning 667-001 extension 7197 or 355-5231, or you can write to me at 112 Cranford Street, Christchurch 1. I will be able to answer any further questions you may have about the study. If you would still like to take part in the study we can then arrange a time for me to visit and talk with you.

THANK YOU FOR YOUR TIME

DEIRDRE RICHARDSON

Appendix Three

Col. 1

GENERAL INFORMATION

I MOTHER

Name: _____

_____ Col. 5

Address: _____

_____

Length of time living at this address: _____

_____

Age: _____

Age at birth of first child: _____

Duration of relationship with father at birth of first child: _____

Race: _____

Marital Status: _____

Education: _____

_____

_____

_____

Income: (list any additional sources of income to the Domestic Purposes Benefit. For example board payments, part-time work, informal allowances from family or friends, including the childrens father.) Col. 17

_____

_____

_____

Col. 18

Length of time living as a single parent: _____ | | |

Are you in a current intimate relationship?

[ ] no

[ ] yes - length of this relationship? | | | | |

Do you belong to any organisations or clubs?

[ ] no

[ ] yes - please list: _____ | |

_____

_____

How many people live in your household? | | |

List: _____

_____

II CHILDREN

Information relating to children under 16 years residing with the mother.

Col. 27

Number of Children: _____ | |

Name of first child: _____

Date of Birth : _____ Age: _____

School: _____ Class level: _____

Teacher: _____

Name of second child: _____

Date of Birth : _____ Age: _____

School: _____ Class level: _____

Teacher: _____

Name of third child: _____

Date of Birth : _____ Age: _____

School: _____ Class level: _____

Teacher: _____

Name of fourth child: _____

Date of Birth : _____ Age: _____

School: _____ Class level: _____

Teacher: _____

Name of fifth child: _____

Date of Birth : _____ Age: _____

School: _____ Class level: _____

Teacher: _____

Names of any additional children on the back of this sheet.

III RELATIONSHIP WITH FATHER

Information recorded in birth order of children.

Col. 28

1. **Name:** _____

Frequency of contact

[ ] Daily
[ ] Weekly
[ ] Monthly
[ ] Yearly
[ ] None

Mother's perceived quality of the relationship

Good Not Good

1 2 3 4 5

2. **Name:** _____

Col. 32

Frequency of contact

[ ] Daily
[ ] Weekly
[ ] Monthly
[ ] Yearly
[ ] None

Col. 33

Mother's perceived quality of the relationship

Good Not Good

1 2 3 4 5

3. **Name:** _____

Frequency of contact

[ ] Daily
[ ] Weekly
[ ] Monthly
[ ] Yearly
[ ] None

Mother's perceived quality of the relationship

Good Not Good

1 2 3 4 5

4. **Name:** _____

Frequency of contact

[ ] Daily
[ ] Weekly
[ ] Monthly
[ ] Yearly
[ ] None

Col. 39

Mother's perceived quality of the relationship

Good Not Good

1 2 3 4 5

Col. 40

5. Name: _____

Frequency of contact

[ ] Daily
[ ] Weekly
[ ] Monthly
[ ] Yearly
[ ] None

Mother's perceived quality of the relationship

Good Not Good

1 2 3 4 5

IV STRESSFUL EVENTS

In the last 12 months:

1. **Have you or any members of the family suffered any major illnesses?**

[ ] no
[ ] yes - describe: _____

_____

_____

_____

Stress rating: Not Stressful Very Stressful

1 2 3 4 5

2. **Has anyone close to you died?**

Col. 45

[ ] no
[ ] yes - please explain: _____

_____

_____

_____

Stress rating: Not Stressful Very Stressful

1 2 3 4 5

Col. 46 ☐

3. **Have you moved home?**

[ ] no

[ ] yes - how many times? _____

_____

_____

_____

☐

Stress rating: Not Stressful Very Stressful

1 2 3 4 5

☐

4. **Have you suffered a job loss?**

[ ] no

[ ] yes - please explain: _____

_____

_____

_____

☐

Stress rating: Not Stressful Very Stressful

1 2 3 4 5

☐

5. **Have you suffered a significant change in income?**

[ ] no

[ ] yes - please explain: _____

_____

_____

_____

☐

Stress rating: Not Stressful Very Stressful

1 2 3 4 5

Col. 52 ☐

6. **Have you experienced the loss of a relationship that was important to you?** For example boyfriend, girlfriend, mother.

[ ] no

[ ] yes - please explain:_____

_____

_____

_____

Col. 53 [ ]

Stress rating: Not Stressful Very Stressful

1 2 3 4 5 [ ]

7. **Has there been a significant change in your home environment?** For example cleanliness, quality of residence, location of residence to essential services compared with previous home.

[ ] no

[ ] yes - please explain: _____

_____

_____

_____

Stress rating: Not Stressful Very Stressful

1 2 3 4 5 [ ]

8. **Have you encountered any difficulties with authority?** For example, Police, D.S.W, Housing Corporation, Schools.

[ ] no

[ ] yes - please explain: _____

_____

_____

_____

Stress rating: Not Stressful Very Stressful

Col. 58

1 2 3 4 5 [ ]

9. **Have you experienced any other events or change in circumstances in the last 12 months that you would consider stressful?**

[ ] no

[ ] yes - please explain:_____

_____

_____

_____

Col. 59 [ ]

Stress rating: Not Stressful Very Stressful

1 2 3 4 5 [ ]

V FAMILY HISTORY:

Information is required regarding the family history pertaining to the following areas:

1. Drug, alcohol or substance abuse
2. Depressive episodes
3. Anxiety attacks
4. Counselling/therapy
5. Intervention programmes, e.g. anger management, child behaviour management, A.A.
6. Relevant medication

Additional information pertaining to mental health and/or well-being will be recorded and categorised as 'Other'.

It may also be necessary to ask about these areas in relation to different members of the family. For example, mother, father, grandparents, children, and any other person the child(ren) has a significant relationship with).

Mother: _____

_____

_____

_____

_____

_____

_____

[ ]

[ ]

[ ]

[ ]

Col. 64

Col. 65

Significant other:

Col. 74

Appendix Four

Department of Psychology
University of Canterbury Christchurch New Zealand
Telephone: (03) 667-001
Fax: (03) 642-181

Dear _____,

I am a postgraduate student of Psychology at Canterbury University. As part of a Master of Arts degree I am undertaking research concerned with the relationship between mothers and their children. I am trying to better understand how mothers and their children affect each others well-being, behaviour, and other aspects of their day to day living. I am specifically interested in families of children with mothers who are parenting on their own because this kind of family represents a substantial proportion of the family units in present day New Zealand.

As a significant proportion of a child's day is spent at school I am asking each child's school teacher to complete a questionnaire which focuses upon the child's behaviour at school. This information will enable me to obtain a more representative picture of each child's well-being and behaviour. As _____ 's school teacher I would appreciate if you could complete the enclosed questionnaire. Instructions on how to complete this form are given at the beginning of the questionnaire. Please try and answer all the questions as best you can. Personal information gathered will remain strictly confidential to the researcher. Any information about the study which is made public will not identify any individual or family. Parental consent for the completion of this form has been given in the enclosed form.

Approval for this study has been given by the Ethics Committee of the Department of Psychology, University of Canterbury. Should you have any queries regarding this questionnaire I can be contacted at the above address or the following telephone numbers, 667-001, ex. 7197, or 355-5231. A stamped addressed envelope is enclosed for returning this questionnaire. I would appreciate if this form could be returned as soon as possible. Thank you for your time.

Yours faithfully

Deirdre F. Richardson.

Dear _____,

In regard to the enclosed questionnaire concerning _____ 's wellbeing and behaviour, I, _____ , give my consent to this form being completed by my child's school teacher. I understand this questionnaire is part of the relationship study being undertaken by Deirdre Richardson, which I have agreed to participate in.

Yours faithfully

_____

Date: _____